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MINISTRY OF AGRICULTURE

MONTHLY REPORT

FEBRUARY, 1938

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MINISTRY OF AGRICULTURE

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MINISTRY OF AGRICULTURE

MONTHLY REPORT

FEBRUARY, 1938.

In the previous report reference was made to the necessity for farmers to plan ahead, and with the time for spring sowing drawing near it may be opportune to develop this theme. As has already been stated from time to time, barley is a most important crop to the farmer, particularly in these days when feeding costs are high, and when, on account of the development of the pig industry, there is greater need for home-grown supplies of this food. It is appreciated, of course, that a number of farmers have become discouraged with the rather poor yields obtained from the sowing of barley in past seasons, but as these results were mainly due to the unsuitability of the soil the remedy has been placed within easier reach of the farmers through the Land Fertility Scheme. Soils which have been treated with dressings of lime are most suitable for barley growing and, as supplies of lime can now be obtained delivered at the farm at half the usual cost, there is no reason why the growing of barley should not be undertaken by more farmers with greater confidence this year. As most tillage farmers are taking advantage of the terms of the Scheme to increase the general fertility of their soil by the application of lime, it is strongly urged now that they should give favourable consideration to the growing of barley, if only for their own requirements for stock-feeding next winter. By this means also not only will the quality of bacon be improved, but through the enrichment of grassland, made possible by applications of lime and phosphatic manures, farmers' bills for feeding stuffs will become appreciably smaller, and the results will also be reflected in the improved condition of grazing cattle.

An article of special interest to egg producers, dealing with the subject of payment for eggs on a quality basis, appears in this issue on page 525.

AGRICULTURAL CONDITIONS.

AGRICULTURAL CONDITIONS AT 1st FEBRUARY, 1938.

Rather variable weather was experienced during the month of January. The first half of the month was fairly dry, with mild temperatures for the time of the year, but later conditions became much more unsettled, and the month will best be remembered for the exceptionally heavy gales and rainstorms of its last weeks.

With conditions more or less favourable for outdoor pursuits in the earlier period, the ploughing of lea land on a fairly extensive scale progressed satisfactorily, but the arrival of broken weather brought this work to a complete standstill. Besides the damage caused by the force of the gales to farm buildings and to stacks of hay, the heavy rainfall in a comparatively short period of time caused inundations of low lying fields and badly drained areas, whilst much flooding was also caused by the overflowing of rivers and streams. Except in light soil areas, where the ground will soon respond to drier weather, and in fields where the drainage system will soon right matters, the prospects of an early resumption of ploughing are none too bright. This work is, however, fairly well forward, and should the present dry weather continue, some further progress with ploughing may be expected soon.

The one redeeming feature of last month's weather was the almost complete absence of severe frosts, and the rather mild temperatures for the time of the year were reflected in the green state of pastures. Up to the time of the heavy rains, well manured pastures were in a remarkably fresh condition for the season and providing a fair amount of keep for livestock. Latterly the heavy rainfall caused flooding, and rendered many fields in a sodden state, but those fields which have recovered are looking fresh and green, and to all appearances resemble early spring-like conditions.

During favourable intervals farmers proceeded with the work of applying dressings of lime and, to a lesser extent, phosphatic manures to agricultural land. This work has been retarded by the adverse weather and soil conditions, but according to all accounts farmers intend to take full advantage of the Land Fertility Scheme with regard to the use of lime, though the use of British basic slag will be necessarily restricted by the continued shortage of supplies.

Supplies of home-grown foodstuffs for stock-feeding are ample for requirements, and the quality generally is very good. In consequence of the continued dullness of trade, and the low prices ruling for potatoes, farmers are using this crop to an increasing extent for feeding to cattle and pigs in order

to keep down the cost of purchased foodstuffs which were, generally speaking, firm in price on the month.

The severe weather was very trying on outlying cattle and sheep, and some animals deteriorated in condition during the month. In most instances, however, farmers maintained their stock in reasonably good condition by hand-feeding with increased quantities of both home-grown and purchased foods. There have been no serious outbreaks of diseases or maladies amongst stock. Contagious abortion, however, was prevalent in some districts, and cases of liver fluke disease have occurred amongst a few flocks of sheep. It is difficult to decide, from replies to recent enquiries, whether or not any marked changes have taken place in the numbers of cattle being stall-fed for beef. The shortage of store animals, as indicated by the high prices, together with the dearness of purchased foodstuffs, have, it is understood, dissuaded many farmers from fattening cattle, but, on the other hand, it was pointed out that many owners want to reap the full benefit of the subsidy, and are accordingly feeding their cattle for beef. The practice of disposing of heifers as beef in order to obtain the subsidy has been checked by the dearness of good quality dairy cattle, and it is likely that with the increase in the standard price for milk sold for manufacturing purposes proving a further incentive to milk production, the demand for heifers and cows for dairy purposes will be maintained.

THE CROPS

Wheat.—Some farmers took advantage of the spells of mild and spring-like weather in the earlier part of January to make further sowings with autumn varieties of wheat. The brairds of earlier-sown crops are looking well as a rule.

There were no reports during the month of further threshings of last year's crop, and sales of grain appear to be few and far between. Prices for grain of fair to good quality were stated to have varied between 8/- and 10/- per cwt. last month.

Oats.—The threshing of this crop proceeded in some districts during the earlier part of the month when weather conditions were suitable. The yields were generally fairly satisfactory, but some complaints were received of the quality of the grain having been adversely affected as a result of heating in the stack after carting from the fields.

Supplies of oats at markets last month were, on the whole, smaller than in December, and the average price rose steadily in sympathy with the costs of other feeding stuffs. The average price for January of 7/3½d. per cwt. compares with 6/11¾d. per cwt. in December, and 6/3¼d. per cwt. in January, 1937. The complete range of prices at markets during January was from

6/6d. to 8/6d. per cwt. A slightly increased quantity of oat straw marketed during January eased in price on the month to around 43/4d. per ton.

With the ploughing of lea land in arrears and the prospects of an early general resumption of this work not too bright on account of the present water-logged state of many fields, it is difficult to reckon the extent of the area that will likely be sown under oats this year. One view is that the increased costs of feeding stuffs will induce many farmers to increase their acreage, but against this is the opinion that labour difficulties will compel many farmers to sow a smaller area under this and other crops.

BARLEY.—Most of this crop has been threshed, and as the grain is generally used on the farms for pig feeding, there are no reports of sales of barley. As to the area of barley likely to be sown this spring, opinions again differ. An instance of the " wish being father to the thought " is more or less illustrated by one or two accounts to the general effect that the great demand for this crop for pig feeding will encourage more farmers to grow more barley. As a number of farmers have had disappointing experiences with the growing of barley in past seasons, mainly as the result of a deficiency of lime in the soil, the Land Fertility Scheme, by enabling farmers to lime their soil at half the usual cost, will assist in removing this obstacle in the growing of barley, and thereby encourage production on an increased scale.

FLAX.—Scutching operations progressed favourably in a number of districts during last month, and this work is now nearing completion. The yields continued to show an appreciable variation, but in the main they have been higher than a year ago. The same remarks apply in respect of quality which, on the whole, however, is fairly good.

The quantity marketed during January was much the same as in the previous month, and the average price was 1¾d. higher at 10/0¼d. per stone. The figure for January, 1937, was 9/10¼d. per stone.

POTATOES.—From all accounts the tubers are keeping exceptionally well in pits and in store, and despite the mildness of the weather very little sprouting has occurred. Large stocks of good quality tubers remain on farmers' hands. There were some encouraging signs of an improvement in the trade for this crop last month, but unfortunately they disappeared towards the end of January, when quotations reacted to former levels. Shipments were, as a rule, fully up to last year's level, and are shown hereunder:

Week ended	*Tons*	*Week ended*	*Tons*
8th January, 1938 ..	5,827	9th January, 1937 ..	4,885
15th ,, ..	4,413	16th ,, ..	6,965
22nd ,, ..	5,912	23rd ,, ..	5,454
29th ,, ..	6,143	30th ,, ..	4,779
5th February ,, ..	4,409	6th February ,, ..	5,739

Growers' prices for the week ended 5th February, were firm on the week, and ranged as follow :—

Ware	*Bagged*	*Loose*
Up-to-Date (Red soil)	£2-0-0 to £2-5-0	£1-15-0 to £2-0-0
Arran Banner	£1-15-0 to £2-0-0	£1-10-0
Arran Consul	£2-0-0	£1-15-0
Arran Victory	£1-15-0 to £2-0-0	£1-10-0 to £1-15-0
Kerr's Pink	£2-0-0 to £2-10-0	——
Seed		
Up-to-Date	£3-10-0 to £4-0-0	£3-10-0
Majestic	£3-15-0 to £4-10-0	——
Arran Banner	£2-5-0	——

At local markets supplies offered for home consumption were smaller than in December, and the average price for all classes cheapened by 2¼d. to 2/4½d. per cwt. Of the principal varieties Arran Victory eased by ½d. to 2/3¼d., and Kerr's Pink cheapened by 2¼d. to 2/8¾d. per cwt.

MANGELS.—The roots are keeping very well in the pits and in store, and only a relatively small proportion has suffered damage from frosting. With turnips lasting out well on most farms comparatively small supplies of mangels have had to be used so far for feeding to stock.

TURNIPS.—This crop, which was a much better one than last year, has kept exceptionally well, and except in a few districts where "Raan" disease has affected the roots, very little loss has occurred from disease or from frost. Supplies of good quality roots are still fairly plentiful in most areas.

CABBAGE AND KALE.—The bulk of these crops has been used up, but in some areas fair supplies of good quality kale are still available.

HAY.—Some stocks suffered damage from the exceptionally heavy storms and rains last month. These adverse weather conditions also necessitated the increased use of supplies for feeding to cattle, but large stocks of fair to good quality hay remain on most farms and should prove ample to cover future requirements. During January the quantity of upland hay marketed was smaller than in December, and the average price cheapened from 65/1d. per ton to 59/9d. Meadow hay, however, was marketed in a larger quantity, and the average price improved from 46/9d. per ton in December to 48/2d. in January.

Small to medium supplies of grass seed still remain on hands. The quality of last year's crop is stated to be generally less satisfactory than usual. During the past month decreasing supplies of seed were marketed at a few centres, and Italian rye grass seed cheapened on the month by 1¾d. to around 9/1¾d. per cwt., while perennial rye grass rose by 8d. to 8/9¼d. per cwt., and mixed seed firmed by ½d. to 7/- per cwt. A larger quantity of crested dogstail marketed at Ballynahinch ranged in price over the month from 50/- to 65/- per cwt.

LIVE STOCK.

CATTLE.—Store cattle are in fair condition generally, and healthy, but the severe weather of the past few weeks has had an adverse effect on some outliers which have lost flesh and are in a thin and backward state. There were very small offerings of store cattle at fairs during January. This was partly attributed to a growing tendency for owners to retain and fatten off their cattle at home in order to reap the full benefits of the subsidy. The weather also had some effect, both on numbers offered and on the attendance of buyers. Good animals in forward condition remained in keen request, and were easily converted into cash at firm rates. For other sorts, however, prices tended lower as the month progressed.

The general condition of the herds of dairy cattle is about normal for the time of year. There have been no serious outbreaks of ill health, and calving has been much the same as usual, although in some districts contagious abortion is causing a little concern. The bad weather has adversely affected the milk yield in a number of districts, and it is understood that during the very severe spell it fell considerably. Recently there has been an improvement in the milk yield, and it is now generally regarded as only a shade below the normal for the time of year. Supplies of dairy cattle at fairs continued small, and animals of quality were very limited in number. For these the demand remained steady and prices firm.

SHEEP.—Most flocks have been maintained in a satisfactory condition by hand-feeding with hay and roots, but the severe weather has left its mark on quite a number of sheep, especially in exposed hilly districts and in areas where the land is in a sodden state. With farmers fully alive to the necessity for guarding against serious outbreaks of liver fluke disease and foot rot, these troubles appear to have been kept well in check. Lambing commenced under none too satisfactory weather conditions, but the results so far have been good, and augur well for this year's crop.

Supplies of sheep and lambs at markets and fairs were small, but generally adequate for requirements. The best types of fat lambs and fat sheep were in fairly steady request, but otherwise trade was dull.

PIGS.—Young pigs were in fairly good supply at fairs throughout the month. Trade was steady and prices ruled at previous levels. Sows for breeding were in small number and a variable trade. Prices ranged from £5 to £10 per head according to age and quality. There were no unusual features in the pork trade during January. Supplies of dead pigs were generally ample for the demand, which was about normal.

HORSES.—At some centres horses were offered for sale in larger numbers last month, but as a rule the quality was lower than of late. The demand was not so keen as in recent months, but good animals were still selling readily

at high prices, although secondary types were slower and cheaper. First-class farm horses sold at up to £50 each, and, in the case of an exceptionally good animal, up to £60, while young and useful farm animals were fetching up to £40 each. For the ordinary type of good useful farm horse prices ranged from about £25 to £35 each.

Milk.—In most districts the milk yield during last month fell to lower levels as a result of severe weather conditions, and supplies may be stated as rather below the level for the time of year.

Creameries paid from 4½d. to 7d. per gallon for milk delivered during January, the separated milk being returned to the farmer. As the average price for milk produced in Northern Ireland, and delivered to creameries for manufacturing purposes, for the month of December, 1937, exceeded the standard price provided by the Milk and Milk Products Acts (Northern Ireland), 1934 to 1937, no equalization payments were made in respect of that month.

THE COST OF LIVING INDEX FIGURE.

The cost of maintaining unchanged the pre-War standard of living of working-class families at January 1st, was 59 per cent. above the level of July, 1914, as compared with 60 per cent. at December 1st, 1937, and 51 per cent. at January 1st, 1937.

At January 1st the index of retail prices of food in Great Britain and Northern Ireland, as ascertained by the Ministry of Labour, was 45 per cent. above that of July, 1914, as against 46 per cent. at December 1st, 1937, and 36 per cent. a year ago. Prices during the month showed little change, except for those of butter and eggs, which were reduced.

THE MARKETS DURING JANUARY.

Smaller supplies of the principal vegetables were marketed last month, as compared with the previous month, and as a general rule price variations were slight. The average price of cabbage was 1½d. dearer on the month at 1/2½d. per dozen, while savoys improved by 1d. to 1/1½d. per dozen, and broccoli by ½d. to 2/- per dozen. Leeks and parsley were unchanged in price at 5¼d. per bunch, and garden turnips sold at late rates at from 1/- to 1/6d. per cwt.

Vegetables that cheapened on the month were carrots, the average price of which was 1/1d. lower at 9/10½d. per cwt., and parsnips which declined by 8¼d. to 7/1¼d. per cwt.

In the provision markets smaller supplies of farmers' print and lump butter cheapened on the month, print being ½d. cheaper at 1/4d. per lb. and lump

1½d. cheaper at 1/2¾d. per lb. According to market returns hen eggs were more plentiful in January than in the previous month, while duck eggs shortened in supply. The prices fixed by the Ministry of Agriculture, as shown in the accompanying table, were maintained above last year's levels.

Poultry supplies assumed normal dimensions, following the holiday season, and hens cheapened by 4d. to an average quotation of 1/8¼d. each, chickens by 3d. to 2/7¾d. each, and ducks by 9¾d. to 1/10¾d. each. Small numbers of turkeys and geese continued to be marketed at a few centres, and prices generally ranged from 8d. to 1/- per lb. live weight for turkeys, and from 4d. to 6d. per lb. live weight for geese.

At Omagh small lots of unwashed wool made late rates of 9d. per lb. for long, and 8d. per lb. for mountain.

MARKETING OF EGGS ACTS (N.I.) 1924—1937.

WHOLESALE DEALERS' PRICES.

The following table shows the prices fixed by the Ministry, and payable by licensed wholesale dealers, for eggs purchased from producers during the following weeks ending on Saturday, compared with average prices at markets for the corresponding weeks of 1936 and 1937.

Week ending	1937		1936	
	Hen Eggs per lb.*	Duck Eggs per dozen*	Hen Eggs per lb.	Duck Eggs per dozen
	s. d.	s. d.	s. d.	s. d.
December 11th	1 3½	1 8	1 1	1 4¾
,, 18th	1 2	1 8	1 0	1 4½
,, 25th	1 2	1 8	0 10¾	1 3¾
	1938		1937	
	s. d.	s. d.	s. d.	s. d.
January 1st	1 0	1 8	0 9¾	1 4
,, 8th	0 10¾	1 7	0 8½	1 2½
,, 15th	0 9½	1 8	0 8	1 2½
,, 22nd	0 9½	1 7	0 8	1 2¼
,, 29th	0 10	1 6½	0 8½	1 2
February 5th	0 10¼	1 6½	0 8½	1 1¾

*Where hen eggs were delivered by the producer to the packing store of a licensed wholesale dealer of Class A an additional ½d. per lb. is payable; in the case of duck eggs an additional ¾d. is payable for each complete dozen so delivered.

AGRICULTURAL PRICES.

The following table shows the average prices of agricultural commodities in Northern Ireland during the three months ended 31st December, 1937, together with comparative figures for the same period in 1936, and the average prices ruling during the fourth quarter of the years 1911-13.

COMMODITY	Quarter ended 31st December. NORTHERN IRELAND. 1937	NORTHERN IRELAND. 1936	ULSTER. 1911-13	Percentage increase or decrease in price as compared with the corresponding period 1911-13. 4th Quarter, 1937	4th Quarter, 1936
	£ s. d.	£ s. d.	£ s. d.	%	%
Oats (White) .. .. per cwt.	0 6 11	0 5 8¼	0 6 6	+ 6.41	−12.5
Potatoes .. .. .. do.	0 2 7¼	0 3 8½	0 2 9	− 5.30	+34.85
Hay, Clover .. .. do.	0 3 1¾	0 3 4¾	0 3 5	− 7.93	− .61
,, Meadow .. .. do.	0 2 3½	0 2 3	0 3 3	−29.49	−30.77
Grass Seed, Italian .. .. do.	0 7 10	0 10 1¼	0 14 11	−47.49	−32.26
,, Perennial .. do.	0 9 4	0 15 10¾	0 11 2	−16.42	+42.35
,, Mixed .. do.	0 6 8¾	0 10 6	0 11 5¼	−41.17	− 8.20
Flax .. .. .. per stone	0 9 10	0 9 2½	0 7 7¾	+28.61	+20.44
Calves (Young) .. .. per head	2 7 8	1 11 8	1 14 1	+39.85	− 7.09
Store Cattle, 6-12 months .. do.	8 0 4	6 4 8	4 14 0	+70.57	+32.62
,, 1-2 years .. do.	10 5 1	8 9 5	7 7 9	+38.80	+14.66
,, 2-3 ,, .. do.	12 3 2	10 16 3	10 2 2	+20.28	+ 6.97
Fat Cattle, 2-3 ,, .. do.	15 3 11	12 17 10	13 11 0	+12.15	− 4.86
,, Cows and Bulls .. do.	11 14 11	10 9 9	12 13 2	− 7.21	−17.15
Springers (Cows and Heifers) do.	18 7 0	15 19 5	14 19 5	+22.57	+ 6.68
Milch Cows (down calved) .. do.	16 15 3	14 17 11	13 15 8	+21.61	+ 8.07
Lambs (under 12 months) .. do.	1 8 9	1 3 8	1 6 5	+ 8.83	−10.41
Wethers .. .. .. do.	1 2 3	0 17 2	—	—	—
Breeding Ewes .. .. do.	2 0 5	1 11 6	—	—	—
Fat Sheep, 1-2 years .. do.	—	—	1 17 5	—	—
,, over 2 years .. do.	1 12 4	1 10 8	1 18 3	−15.47	−19.83
Sows for Breeding .. .. do.	7 14 10	6 8 3	5 9 5	+41.51	+17.21
Young Pigs, 8-10 weeks .. do.	1 12 7	1 9 7	1 6 2	+24.52	+13.06
Pork .. .. .. per cwt.	† 3 5 10	† 2 19 3	2 12 10	—	+11.83
Butter, Farmers .. .. do.	7 0 3¼	5 9 4¾	5 5 6	+32.96	+ 3.69
Hen Eggs .. .. per lb.	0 1 2	0 1 1	* 0 13 11	—	—

* All Ireland price per 120.

† Average prices calculated from purchase and grading statements, allowance being made for levy and contribution charges.

Cattle prices remained the most satisfactory feature of the trade in agriculture during the last quarter of 1937. Although prices of stores and fat cattle eased slightly from their previous high levels they continued to show an appreciable improvement on the 1936 figures. A stronger demand for dairy cattle during the quarter under review was marked by further price increases, and for these, as indeed for all cattle, values were higher than in any other season since 1931. It is realised of course, that having regard to costs of feeding stuffs, prices in the former year were perhaps more profitable. There was a seasonal decline in the trade for sheep and lambs, and prices generally eased from the levels obtained in the third quarter of the year, but as will be seen from the table they were all above those for the fourth quarter of 1936. The same can be said of pigs and pork, but, again, having regard to the higher prices ruling for breeding stock and young pigs, together with the dear rates prevailing for purchased feeding stuffs, pork prices, although higher than a year ago, were not any more remunerative.

Crop prices were generally a little easier in the fourth quarter of last year than the previous three months, and compared with 1936, the position is not too favourable. Oats and flax were dearer than a year earlier, and hay was little altered in comparison, but potatoes and grass-seed were much cheaper and there is, therefore, considerable room for improvement in the general position of crop prices. As to provisions, butter prices reflected the higher costs of production, while hen eggs also increased in price on this account, although perhaps to a relatively less marked degree. In connection with the latter it should be mentioned that the price-fixing machinery under the Marketing of Eggs Act, 1936, began to function at the beginning of October last year.

EXTENT AND PRODUCE OF THE POTATO CROP IN NORTHERN IRELAND, 1937.

The estimated average yield of the potato crop in Northern Ireland in 1937 is 6.9 tons per statute acre, as against 6.0 tons per statute acre in 1936, and 6.8 tons per statute acre in the ten years 1927-1936.

The following table shows the estimated extent, total produce and average yield per statute acre of the crop in Northern Ireland in 1937, with comparative figures for the year 1936, and the decennial period 1927-1936.

The estimated produce and yield per acre shown in the table represents in all cases the yield of SOUND tubers only.

	Potatoes.		
	Total Acreage	Total Produce	Average yield per statute acre
	Acres	Tons	Tons
1937	125,426	867,979	6.9
1936	131,740	784,634	6.0
Average for the period 1927-1936	140,983	955,830	6.8

LIVE STOCK CENSUS, JANUARY, 1938.

Statement showing the numbers of Cattle, Sheep, Pigs and Poultry in Northern Ireland as at 1st January, 1938, 1st June, 1937, and 1st January, 1937, and the percentage changes in the numbers at the 1st January, 1938, as compared with the numbers at the 1st January, 1937, and the 1st June, 1937.

	1st January 1938	1st June 1937	1st January 1937	% Change January 1938 as compared with	
				June 1937	January 1937
Cattle :—					
Bulls (for service) ..	4,228	4,385	4,341	— 3.6	— 2.6
Milch Cows	229,999	237,241	244,038	— 3.1	— 5.8
Heifers in Calf ..	34,863	22,646	30,284	+53.9	+15.1
Other Cattle :—					
Two years old and upwards	71,080	74,689	70,839	— 4.8	+ 0.3
One year and under two years	156,312	193,615	163,899	—19.3	— 4.6
Under one year ..	185,923	197,533	199,153	— 5.9	— 6.6
Total	682,405	730,109	712,554	— 6.5	— 4.2
Sheep :—					
Rams (for service) ..	17,451	10,352	16,662	+68.6	+ 4.7
Ewes (for breeding) ..	426,272	376,916	418,770	+13.1	+ 1.8
Other Sheep :—					
One year old and upwards	26,185	23,629	21,167	+26.5	+ 7.0
Under one year ..	90,984	405,954	70,418	—77.6	+29.2
Total	560,892	828,851	530,317	—32.3	+ 5.8
Pigs :—					
Boars (for service) ..	1,498	1,585	1,657	— 5.5	— 9.6
Sows (for breeding) ..	53,107	54,390	57,171	2.4	7.1
*Other Pigs (see footnote) ..	468,482	514,074	501,014	— 8.9	— 6.5
Total	523,087	570,058	559,842	— 8.2	— 6.6

	1st January 1938	1st June 1937	1st January 1937	% Change January 1938 as compared with	
				June 1937	January 1937
Poultry :—					
Turkeys	65,318	420,466	67,361	—84.5	— 3.0
Geese	33,219	111,556	39,296	—70.2	—15.5
Ducks	325,782	427,808	350,912	—23.8	— 7.2
Ordinary Fowl ..	5,791,630	9,222,437	6,109,952	—37.2	— 5.2
Total	6,215,949	10,182,267	6,567,521	—39.0	— 5.4

*The age classification of "Other Pigs" at the 1st January, 1938, is not the same as at the 1st June and 1st January, 1937, and accordingly the numbers under each heading are not strictly comparable. The total numbers of other pigs at each of the dates are, however, comparable. The numbers by age classification are given hereunder.

	1st January, 1938		1st June, 1937	1st January, 1937
5 months old & upwards	81,546	6 months old & upwards	45,267	43,184
Over 2 & under 5 months old	221,360	Over 3 & under 6 months old	200,078	203,545
Under 2 months old ..	165,576	Under 3 months old ..	268,729	254,285

MARKETING OF EGGS.

PAYMENT ON A QUALITY BASIS.

As readers of the Ministry's Monthly Report are aware, the provisions of the Marketing of Eggs Act (Northern Ireland) 1936, so far as they relate to the fixing of egg prices, are being brought into operation by stages.

The first stages, which consisted of the setting up of the Egg Marketing Committee, and the tendering of advice by the Committee to the Ministry of Agriculture as to the general principles, in accordance with which producers' prices should be fixed, were described in an article entitled the "Fixing of Egg Prices," which was contained in the issue of the Report for September, 1937.

Since the 11th October, prices have been fixed each week for eggs purchased from producers by Class A and Class B dealers, and also for eggs purchased by Class A dealers from Class B dealers.

As from the 6th December these prices were, with modifications in certain cases, extended to purchases of eggs from producers by holders of retailers' licences, but hitherto no provision has been made for the payment at a lower rate, for eggs which are found, on being tested, not to comply with the standard prescribed for "new laid eggs."

It will be remembered that one of the two main objects of the 1936 Act was to provide for the payment of producers "on a quality basis" in order to encourage producers to sell only fresh eggs and to discourage them from "holding over" their eggs in the hope of a rising market. It is now proposed to introduce arrangements whereby, as from 28th February, producers who sell eggs which are found on examination to be "seconds", soiled eggs or "rejects," will receive lower prices than producers who sell fresh eggs. Accordingly, it is important that producers should, in their own interests, make themselves familiar with the methods which are to be adopted for carrying out these arrangements.

It is hoped, that as a result of this article, producers will appreciate the objects of payment on a quality basis, and that they will be able to satisfy themselves that they are receiving the correct price for any eggs sold by them to wholesale dealers or retailers.

On purchasing a lot of eggs from any producer, a wholesale dealer or retailer must fill up, or cause to be filled up, an IDENTIFICATION TICKET showing the name of the purchaser, the date of purchase, and, if delivery is accepted by an employee of the purchaser, the name of the employee. He must also enter on the ticket the number of eggs in the lot, and, if the eggs are hen eggs, the weight of the lot. The identification ticket must be made out in triplicate and one copy of the ticket must be handed to the producer, one copy placed with the eggs, and another copy retained by the purchaser as a

record of the purchase. Producers should satisfy themselves that the ticket has been correctly completed, and should keep their copy carefully pending payment being made for the eggs. Not more than seven days after the sale of the eggs, the ticket which accompanied the eggs must be returned to the producer. The ticket will now have been completed showing the statutory price per lb. or per dozen payable for the eggs, and the price which would be payable if all the eggs complied with the standard for clean " new-laid eggs." If the eggs were purchased by—

(a) a Class A dealer;

(b) a Class B dealer for sale to a Class A dealer; or

(c) a retailer, who is authorised by the Ministry to test eggs;

the eggs will have been tested and the tester's report entered on the identification ticket. This report, which will show the number (if any) of "seconds," "soiled eggs" and "rejects" respectively in the lot of eggs, will be dated, initialled by the tester and stamped with the name of the Class A dealer or retailer who is responsible for the testing. Where eggs are sold to a retailer who is not authorised to test eggs, no reference to "seconds" or "rejects" will appear in the tester's report, but the number of "soiled eggs" included in the lot will be inserted. The Ministry has taken steps to provide for proper supervision of the testing of eggs at all Class A merchants' stores, and at the premises of those retailers who are authorised to test eggs. Accordingly, producers may rest assured that the testing of eggs will be carried out in a fair and uniform manner, and that every precaution will be taken to ensure that every clean "new-laid egg" is classified as such.

The importance of the tester's report from the producer's point of view lies, of course, in the fact that the Ministry proposes, on the advice of the Egg Marketing Committee, to prescribe that, as from the 28th February next, deductions will be made at specified rates per egg for "seconds", "soiled eggs" and "rejects" respectively. These rates, which will be published with the statutory prices, will be inserted on the identification tickets, the appropriate deduction made in respect of any "seconds", etc. appearing in the tester's report, and the amount payable to the producer clearly entered on the ticket. Producers, on receiving the completed ticket, should compare it with the copy retained by them, and see that the serial number of the ticket, and the quantity of eggs shown on the ticket are the same on both.

It will be obvious that, in future, it will be to the financial interest of every producer to market his eggs in a clean and fresh condition, and, consequently, many producers may find it useful to obtain a copy of the Ministry's Talks Leaflet No. 27, " How to Keep Eggs Clean," Leaflet No. 39, " Hints on the Care and Handling of Eggs for Market," or of Leaflet No. 57, " How to have Eggs of First Quality." Copies of these leaflets may be obtained, free of charge, on application to the Ministry of Agriculture, Stormont, Belfast. Envelopes so addressed need not be stamped.

MARKETING SCHEMES.

AGRICULTURAL MARKETING (PIG INDUSTRY) ACT (N.I.), 1934.

PIG PRICES FOR FEBRUARY, 1938.

The following announcement has been made by the Pig Industry Council.

PRICES FOR DEAD PIGS.

The prices per dead cwt. for dead pigs sold by producers to curers in Northern Ireland in February, 1938, are as follows:—

Weight Class. (Dead Weight)	Grade 1.	Grade 2.	Grade 3.	U.L. or U.F.	Partly Black Pigs.
c.1.0.21 to c.1.1.13	66/11	63/11	60/11	56/11	
c.1.1.14 to c.1.2.3	70/11	67/11	64/11	60/11	5/-
Weight Class. (Dead Weight)	**Grade A.**	**Grade B.**	**Grade C.**	**U.L. or U.F.**	below
c.1.2.4 to c.1.2.14	70/11	67/11	64/11	61/11	relevant
c.1.2.15 to c.1.3.14	70/11	67/11	64/11	61/11	Grade
c.1.3.15 to c.2.0.0	67/11	64/11	61/11	58/11	Price.
c.2.0.1 to c.2.0.14	61/11	58/11	55/11	52/11	

Pig Carcases c.1.0.0 to c.1.0.20:—63/11.

The standard dead pig price (Grade B, wt. cl. 2) is the same as that for January, 1938.

Authorised cuts:—

(a) Broken ham (dry, shank and/or shell bone break)—5% of the gross value of the carcase.

(b) Broken ham (wet break)—12½% of the gross value of the carcase.

(c) Shoulder-stuck carcase—3/- per shoulder affected.

The gross value of a carcase is the product of the dead weight and the relevant grade or other price per cwt.

Where portion of a pig carcase is condemned on account of disease the existence of which could not reasonably have been known to the producer before despatch to the curer, the appropriate grade price (or fixed price if the carcase weighs not less than 1 cwt. 0 qr. 0 lb. and not more than 1 cwt. 0 qr. 20 lb.) shall apply. If the carcase is wholly condemned on account of disease the existence of which could not reasonably have been known to the producer before despatch to the curer the relevant Grade 2 or Grade B price (or fixed price if the carcase weighs not less than 1 cwt. 0 qr. 0 lb. and not more than 1 cwt. 0 qr. 20 lb.) shall apply.

The foregoing prices do not apply in the case of (a) wholly black pigs, boars, rigs or stags, sucked sows, and pig carcases weighing under c.1.0.0 or over c.2.0.14, and (b) pigs visibly diagnosable as diseased before despatch by the producer and subsequently condemned; emaciated or screw pigs; smelling pig carcases with definite indications of putrefaction, and pig carcases badly abused or damaged before being handed over by the producer to the curer.

Prices for Wiltshire Pigs Sold on Direct Contract.

In the case of pigs sold alive under direct contract to Wiltshire curers the prices per dead cwt. payable for pigs delivered in respect of the month of February, 1938, are as follows:—

Weight Class. (Dead Weight)	Grade 1.	Grade 2.	Grade 3.	U.L. or U.F.	Unsuitable.
c.1.0.21 to c.1.1.13	76/11	73/11	70/11	66/11	63/11
c.1.1.14 to c.1.2.3	76/11	73/11	70/11	66/11	63/11
	Grade A.	Grade B.	Grade C.		U.L. or U.F.
c.1.2.4 to c.1.2.7	73/11	70/11	67/11		64/11
c.1.0.0 to c.1.0.20	Suitable 65/11		Unsuitable 63/11		
Over c.1.2.7	On the same basis as pigs sold dead (See I. above)				

Prices for Live Pigs Sold to the Pigs Marketing Board (Northern Ireland).

In the case of pigs sold alive to the Pigs Marketing Board during February, 1938, the prices per live cwt., according to grade, are as follows:—

Live Weight.	Grade 1.	Grade 2.	Grade 3.	U.L. or U.F.	Unsuitable.
c.1.1.14 to c.1.2.13	49/6	49/6	49/6		48/-
c.1.2.14 to c.2.0.0	57/9	55/6	53/3	50/3	48/-
c.2.0.1 to c.2.1.14	53/3	51/-	48/9		46/6
c.2.1.15 to c.2.2.7	51/-	48/9	46/6		44/3
c.2.2.8 to c.2.2.21	46/6	44/3	42/-		39/9

These prices do not apply to live pigs under c.1.1.14 or over c.2.2.21, live pigs intended for breeding, live boars, live sucked sows, rigs or stags,

injured or diseased pigs, live in-pig gilts, or live pigs sold (on contract registered with the Pig Industry Council) to curers in Northern Ireland. All other live pigs inside the weights c.1.2.0. to c.2.2.21 can be sold only to the Board.

Authorised Deductions.

Every pig (dead or alive) sold to a curer or to the Pigs Marketing Board is subject to a levy at present amounting to 1/-.

In addition to this amount, a deduction of 4d. per pig may be made in the case of sales to curers to cover insurance, so that the producer will not suffer financial loss if the carcase is condemned as unfit for human consumption.

GRADING STATISTICS.

Table showing the percentages of pig carcases falling within the weight and grade classes indicated, during December, 1937.

Under c.1.0.21		c.1.0.21 to c.1.1.13					c.1.1.14 to c.1.2.3					Totals
Suitable	Unsuitable	Grade 1	Grade 2	Grade 3	U.L. & U.F.	U.	Grade 1	Grade 2	Grade 3	U.L. & U.F.	U.	
91	.15	1.92	1.21	.41	.20	.02	3.34	4.50	2.42	1.18	.03	16.29

Grade A.				Grade B.				Grade C.				
1	2	3	4	1	2	3	4	1	2	3	4	
6.98	19.21	4.61	1.04	5.81	20.14	6.13	2.36	2.01	8.20	1.48	.54	78.51

Ungraded Carcases.						
Under Grade A measurements. U.L.	Over Grade C measurements U.F.	Wholly condemned U1.	Wholly black, injured or damaged U2.	Overweights, boars, sows, etc. X.	Partly Black Y.	
.02	2.84	.02	.58	1.71	.03	5.20
					Total	100%

These figures have been calculated from the purchase and grading statements which the curers furnish to the Ministry.

During December the volume of trade in pig carcases was again slightly reduced. The average price per head was 1/4d. dearer on the month at £5 14s. 7d. and the average price per cwt. rose by 9d. to £3 6s. 9d. The average weight was unchanged at c.1. 2qr. 24lb.

The following table gives the percentage results of an analysis of the purchase and grading statements furnished by Wiltshire Bacon Curers in respect of live pigs delivered on direct contract by producers during the month of December, 1937.

Weight Class.	Grade 1.	Grade 2.	Grade 3.	Unsuitable U.L. or U.F.	Total
Under c.1.0.0 ..				—	.72
c.1.0.0 to c.1.0.20 ..				—	2.34
c.1.0.21 to c.1.2.3 ..	40.91	29.05	11.51	5.40	86.87
	Grade A.	Grade B.	Grade C.		
c.1.2.4 to c.1.2.7 ..	.63	1.25	3.42	.90	6.20
c.1.2.8 to c.1.3.14	.18	.72	1.80	1.17	3.87
				TOTAL	100.00

The average net price per cwt. in respect of these deliveries works out at £3 12s. 11d., after making allowance for insurance and contribution to the Pigs Marketing Board.

The average weight works out at c.1.1.15, the net average price per pig being £5 1s. 2d.

COST OF STANDARD PIG RATION.

The average retail cash price per cwt. of the standard ration for the sixteen weeks' period ended 22nd January, was 10/2¾d. This figure has been calculated by the Ministry from returns collected from 10 representative centres in Northern Ireland.

The following is the ration upon which the feeding cost is based :—

Maize Meal	30%
Barley Meal	30%
White Pollards	20%
White Bran	10%
Meat Meal (60% Protein) ...	10%

MARKETING OF EGGS RULES (NORTHERN IRELAND), 1938.

The Ministry has recently made Rules under the Marketing of Eggs Acts (Northern Ireland), 1924-37, which consolidate and amend all the existing Rules embodying the conditions to be complied with by licensed wholesale dealers, and also certain conditions to be complied with by holders of retailers' licences in regard to the purchase of eggs from producers. The Rules, which cost 1/4d. net, or 1/5d. post free, may be obtained through any book-seller, or may be obtained directly at His Majesty's Stationery Office, 18 Chichester Street, Belfast.

Every licensed wholesale dealer should obtain a copy of these Rules, and producers also would be well advised, if they desire to have a full understanding of the working of the Marketing of Eggs Acts, to obtain a copy. These Rules contain, in legislative form, amongst other things, particulars of the system of identification, which is described in an article in this report, and which is, of course, of first rate importance to all producers who sell their eggs to wholesale dealers or holders of retailers' licences.

BUTTER AND CREAM MARKETING BOARD.

ELECTION OF MEMBERS BY REGISTERED PRODUCERS.

Under Paragraph 6 of the Butter and Cream Marketing Scheme (Northern Ireland), 1936, two members of the Butter and Cream Marketing Board are required to retire in the present year. Messrs. W. J. McAllister and R. G. McCullagh are the retiring members, and accordingly an election to fill the two vacancies will be held in March. The two members will be elected by registered producers, the management of whose business and premises is controlled by the milk suppliers through an elected committee of management. Candidates for election require to be nominated in writing by a proposer and seconder, both of whom must have been registered at the 1st February, 1938, with the Butter and Cream Marketing Board. The nomination paper, when completed, is to be sent by registered post to reach the Secretary, Ministry of Agriculture, Stormont, Belfast, not later than the 20th February, 1938.

Voting papers will be issued not later than the 10th March to all persons entitled to vote in the election, and must be returned so as to reach the Ministry not later than the 20th March. Under the provisions of the Scheme the nomination of candidates, and the casting of votes at an election of members to the Board, are to be made on behalf of a registered producer by the manager of the creamery owned or occupied by that registered producer.

THE CATTLE INDUSTRY (EMERGENCY PROVISIONS) ACTS, 1934 AND 1935 AND THE LIVESTOCK INDUSTRY ACT, 1937.

The following is a summary of payments made under these Acts up to and including 22nd January, 1938.

Live Weight	Number of Animals	Total Amount paid £ s. d.
England and Wales ..	3,759,242	8,936,439 5 3
Scotland	1,130,044	2,821,766 1 8
Northern Ireland ..	397,895	829,684 3 11
Total (United Kingdom) ..	5,287,181	12,587,889 10 10
Dead Weight		
England and Wales ..	122,567	307,343 16 0
Scotland	35,806	98,545 14 6
Total (Great Britain) ..	158,373	405,889 10 6

NUMBERS CERTIFIED FOR SUBSIDY.

The numbers of fat cattle certified for payment of subsidy, published by the Livestock Commission in respect of the months of November and December, 1937, are shown hereunder.

	November, 1937.					Corresponding totals in	
	Home-bred		Imported				
	Ordinary Grade	Quality Grade	Ordinary Grade	Quality Grade	Total	Nov., 1936	Nov., 1935
England ..	46,713	20,503	15,235	11,943	94,394	98,921	88,380
Wales ..	7,296	925	300	100	8,621	9,759	7,586
Scotland ..	4,469	12,518	1,682	7,317	25,986	26,369	24,959
Northern Ireland	8,094	448	999	82	9,623	9,488	11,051
United Kingdom	66,572	34,394	18,216	19,442	138,624	144,537	131,976

	December, 1937					Corresponding totals in	
	Home-bred		Imported				
	Ordinary Grade	Quality Grade	Ordinary Grade	Quality Grade	Total	Dec., 1936	Dec., 1935
England ..	29,206	30,458	8,187	10,956	78,807	94,611	88,092
Wales ..	4,675	2,602	111	146	7,534	8,195	8,521
Scotland ..	3,144	16,287	775	7,635	27,841	30,390	29,795
Northern Ireland	5,668	829	547	100	7,144	9,148	11,437
United Kingdom	42,693	50,176	9,620	18,837	121,326	142,344	137,845

WHEAT ACT, 1932.

INCREASE OF QUOTA PAYMENT.

In pursuance of the powers conferred upon him by the Wheat Act, 1932, the Minister of Agriculture and Fisheries, after consultation with the Wheat Commission, has made the following Orders:—

(1) The Wheat (Quota Payments) No. 1 Order, 1938, which prescribes that the amount of the quota payment which every miller and every importer of flour shall be liable to make to the Wheat Commission in respect of deliveries of flour during the period commencing Sunday, 23rd January, 1938, shall be 4.8 pence per cwt. (equivalent to one shilling per sack of 280 lbs). This is an increase of sixpence per sack on the rate which has been in force since the 19th September, 1937.

The new Quota Payments Order comes into operation on Sunday, the 23rd January, 1938, and quota payments will accrue due at the new rate in respect of all deliveries of flour taking place on or after that day. In cases where flour or bread is exported on or after the 23rd January, 1938, the repayment of quota payments to the exporter will be made by the Wheat Commission at the new rate.

(2) The Wheat (Anticipated Supply) No. 1 Order, 1938, which prescribes that the quantity (called the "anticipated supply") of home-grown millable wheat of their own growing, which the Minister anticipates will be sold by registered growers during the cereal year ending 31st July, 1938, will be 25 million cwts. This Order supersedes the Wheat (Anticipated Supply) No. 2 Order, 1937, under which the "anticipated supply" was prescribed as 26 million cwts.

ADVANCE PAYMENT TO REGISTERED GROWERS ON ACCOUNT OF DEFICIENCY PAYMENTS FOR 1937-38.

In accordance with Byelaw 31 of the Wheat Byelaws, 1932, the Wheat Commission give notice that they have decided to make an advance payment to registered growers in respect of wheat certificates delivered to the Commission on or before Thursday, 27th January, 1938. This advance payment is on account of the deficiency payments that will become due under the Wheat Act for the cereal year ending 31st July, 1938. It will be made on or about Thursday, 24th February, 1938, and will be at the rate of 8d. per cwt., equal to 3s. 0d. per quarter of 504 lbs. Such balance as may become due will be paid in September, 1938. Until then no further payment will be made in respect of these certificates.

The question of making an advance payment to growers who deliver wheat certificates after 27th January will be considered by the Commission later in the year.

AGRICULTURAL NOTES.

SEASONAL FARM NOTES.

Supplies of Manures.—This is the time to obtain supplies of manures and seeds in readiness for spring requirements. Early arrangements for obtaining supplies of artificial manures will not only save time and worry later, but will also save money, as prices increase as the season advances. Provided the manures are carefully stored in a dry shed, there is no danger of losses taking place through wastage or deterioration. It has been proved conclusively, that the standard mixture of artificials for potatoes, namely, 1 cwt. sulphate of ammonia, 4 cwt. superphosphate and 1 cwt. muriate of potash, can be mixed for several weeks before application without imparing its efficiency in any way. To assist farmers in estimating the probable quantities of artificials required, suitable mixtures of manures for the various crops and the quantities required per acre are given on page 539.

Seed Oats.—Where supplies of fresh seed oats are required, these should be obtained or ordered as soon as possible. Varieties such as Crown and Stormont Arrow give high yields on land in good condition, but for the poorer classes of soils a variety of the Potato type, or other variety suitable for such soils, should be chosen. The Agricultural Instructor for the district should be consulted, however, if there is any doubt regarding the most suitable variety to grow.

Seed Potatoes.—The planting of potatoes grown from stocks which are reasonably free from virus diseases such as mosaic and leaf roll, is the first essential to obtaining heavy yields. As potatoes are low in price this year, farmers desiring to change their seed, are strongly advised to take the opportunity afforded of obtaining seed from healthy stocks at reasonable prices. Lists giving the names and addresses of growers of healthy and pure crops of potatoes can be obtained from the Ministry free on request.

Barley Growing.—The results of the barley variety tests carried out by the Agricultural Instructors last season are given on page 542. These results clearly indicate that good crops of barley can be grown in Northern Ireland on land which is suitable for the crop, and in view of the value of barley for pig feeding purposes, farmers, particularly those engaged in pig-keeping, are advised to grow even a small area of this crop in the incoming season. As barley grows best in soils which are well supplied with lime, a dressing of from 1 to 2 tons per acre of burnt lime can, with advantage, be applied on the top of the ploughed ground about a fortnight before the seed is sown. Barley seed should be ordered in good time as there is sometimes difficulty in obtaining supplies when sowing time arrives. The seed should be sown early in April at a rate of from 14 to 16 stones per statute acre, where the seed is sown broadcast.

WHEAT.—The results of the autumn wheat variety trials carried out by the Agricultural Instructors are given in this Report on page 540. It should be noted that the varieties mentioned are suitable only for autumn or early winter sowing and not for spring sowing. If it is desired to sow wheat at this season, only a spring variety such as Red Fife or Red Marvel should be grown, as satisfactory crops from the common autumn varieties will not be obtained if sowing is delayed until February. The rate of seeding for spring varieties of wheat, except Red Fife, should be from 1 to 2 stones per statute acre more than for winter varieties; in the case of Red Fife, which tillers or "stools" poorly, a seeding of not less than 18 stones per acre should be given, where the seed is sown broadcast. For spring wheat the land should be in good condition and the seed bed well prepared so that a vigorous and quick growing crop may be obtained.

LIMING.—The best time to apply lime in a crop rotation is after the potato and turnip crop and just before the land is laid out to grass. Accordingly, where land is to be sown out to grass this spring, farmers are strongly advised to take advantage of the Land Fertility Scheme to obtain supplies of lime at half the usual cost and apply dressings to such land before the oats and seeds mixture are sown. The lime should be applied on top of the ploughed ground about a fortnight before the oats are sown.

PASTURES.—Where phosphatic manures have not been applied during the past winter to grassland, improvement in this year's grazing may still be obtained by the application of Semsol or of superphosphate now at the rate of from 4 to 6 cwt. per statute acre. On the lighter classes of soils, the addition of 1 cwt. 30 per cent. potash salts per acre is beneficial. Where there is a mat of old grass or of fog, the field should be thoroughly harrowed before the manures are applied. An application of 1 cwt. per acre of a nitrogenous manure, such as sulphate of ammonia or nitro-chalk, during March or April is beneficial for the production of early grass.

SEASONAL LIVESTOCK NOTES.

OX WARBLE FLY.—Cattle owners are reminded that in accordance with the Ox Warble Fly Order, the first dressing for the destruction of ox warble fly maggots must be applied to cattle between the 15th and 22nd March. Subsequent dressings at intervals of 28 days must also be applied until no further maggots appear.

There are a number of derris-root preparations on the market for destroying ox warble fly maggots, but farmers are advised to consult the Agricultural Instructor or Overseer for the district before purchasing a preparation which they have not used in previous years. Supplies of the preparations should be obtained in good time so that there will be no delay when the period for

the first application arrives. Delay in applying the first dressing may allow some of the maggots to escape from the cattle and will thus perpetuate the pest. Particulars regarding the regulations to be complied with under the Order are given in Circular No. 13, and information relating to the preparation and application of the washes is given in Leaflet No. 64.

Sheep.—As the lambing season approaches, special care of the breeding sheep is necessary so that the number of losses at lambing may be kept as low as possible. The flock should be brought to a convenient field each evening so that they can be looked over at night and again early in the morning, and cases where assistance at lambing is necessary observed in good time. Before giving any assistance to a lambing ewe, the hands of the attendant should be well washed with soap and warm water to which a little mild disinfectant has been added, and subsequently lubricated with raw linseed oil. It is advisable in all cases to apply a little mild disinfectant to the lamb's navel after lambing. Further, as an aid in preventing the condition known as "wool ball" in the lambs, any loose wool around the udders and flanks of the ewes should be removed as soon as possible after lambing has taken place.

A field of fresh young pasture should be reserved for the ewes and their lambs, and the animals turned on to such pasture as lambing proceeds. Good grazing promotes the milk flow of the ewes and aids in the production of early fat lambs.

Pigs.—When weather conditions are suitable, sows and litters should be allowed a daily run out on fresh, clean pasture. A daily run out promotes good thriving and aids in reducing mortality during the rearing stages.

SEASONAL GARDEN AND ORCHARD NOTES

Spraying of Apple Trees.—The spraying of apple trees with tar-distillate washes should be pushed on whenever the weather is suitable, as this work should be completed before the end of the month.

Manuring Apple Trees.—Apple trees which require nitrogenous manure should get a dressing of sulphate of ammonia now. Generally speaking, trees which did not make at least nine inches of growth last year or the bark of which is of a reddish brown colour, may be regarded as requiring nitrogen. The amount of sulphate of ammonia to be applied will vary according to the nature of the soil and the variety and age of the tree but from 1 lb. to 1½ lb. is an average dressing for a full grown tree. A dressing of sulphate of potash should also be given now (if this has not already been done) at the rate of 4 cwt. per acre.

Planting of Strawberries.—Strawberry runners may be planted now if the ground can be got into suitable condition. Blanks in plantations made last autumn should be made up and all plants made firm in the ground.

Cabbage and Lettuce.—Cabbage and lettuce plants which have wintered in the seed-bed, and cauliflowers which have wintered in a cold frame may be planted out as soon as the soil can be got ready. Cabbage planted out last autumn should receive a dressing of nitrate of soda at the rate of 3 cwt. per acre.

Potatoes.—On warm soils and in sheltered positions early varieties of potatoes can be planted now. The stock of "seed" of the later varieties should be examined and the tubers brought into the light so as to toughen the buds.

Other Vegetables.—Broad beans and early peas may now be sown in sheltered positions out of doors, and, early in March if weather and soil conditions are suitable, a sowing of onions, brussels-sprouts, cabbage and cauliflowers may be made out of doors. Particulars of vegetable growing are giving in Leaflet No. 67.

Flowers.—Stocks of dahlia and begonia tubers should be examined and decaying ones removed. The sound tubers should be placed in boxes of moist light soil and the boxes placed in a greenhouse or cold frame. Seeds of half-hardy annuals such as lobelia, golden-feather, etc., should be sown in boxes and these placed in a frame over a mild hot-bed.

SEASONAL POULTRY-KEEPING NOTES.

Hatching.—Hatching from heavy breeds should still be proceeded with, but if the pullets are to come into production early next autumn, eggs from such birds should not be hatched after the month of March.

Feeding of Chickens.—The feeding and management of the chickens call for special attention now. The quality of the ingredients used in the meal and grain mixtures is of primary importance. The foods used should be of the best quality only, fresh and free from mustiness, and always placed before the birds in a fresh clean palatable condition. Mashes for chickens can be conveniently made up at home, and by doing so, poultry-keepers can not only ensure that the ingredients used in making up the mash are of the best quality but can also effect economies in outlay, as home-made mixtures are generally cheaper than proprietary ready-mixed mashes. Particulars of suitable meal and grain mixtures for chicken rearing purposes, which can be made up on the farm, are given in Leaflet No. 20.

Rearing Accommodation.—Adequate accommodation in rearing houses is essential if good results are to be obtained. It should be borne in mind that the effects of good feeding may be nullified if the chicks are overcrowded in brooders or rearing houses. Not more than 100 chicks should be placed in a hover or brooder which is advertised as being of 150 chick capacity, while an allowance of about one square foot of floor space to every two chickens in the rearing house is necessary. The rearing of chickens in small flocks of from 50 to 80 birds is strongly recommended. Adequate hopper or trough space should be provided, otherwise some of the chicks will not get enough food for their requirements. During the early stages, an allowance of about 4 feet of hopper space per 100 chicks should be provided and this amount should be increased as the birds grow older.

Separation of Sexes.—When the sexes can be determined, the cockerel chicks should be removed from the pullets, and if intended for sale or table purposes, fed on a more fattening ration. This practice will give more housing room for the pullets and will also allow these birds to be fed on body-building foods.

Use of Cod Liver Oil.—Particular attention should be paid to the purchase of cod-liver oil for chicken feeding purposes. There are a number of low quality oils on the market which are of little value, and the use of such oils will not give good results. When purchasing cod-liver oil a guarantee in respect of its vitamin content and also of its freshness should always be obtained.

Value of Sunlight.—Direct sunlight is of the greatest value for young growing chickens and at every opportunity when weather conditions permit the windows or shutters of the rearing house should be left open.

Green Food.—If indoor rearing is practised, green food is essential and a supply of cabbage, kale, or turnip tops should be provided.

Fresh Rearing Ground.—The importance of rearing chickens on fresh clean ground may again be stressed. While the chickens may, if necessary, be reared indoors for the first six weeks, free range should be provided after that period. The houses should be placed in a field of fresh, clean pasture where chicks or adult stock have not been kept for a number of years; a field which has been newly sown out to grass is ideal for this purpose. Parasitic diseases, such a coccidiosis and gapes and infestations of worms frequently occur when the birds are put out on range, particularly if they have been reared indoors. Such outbreaks of diseases are undoubtedly due to allowing the birds to range on foul ground.

TURKEYS.—Turkey hens for breeding should be fed on a good laying mash and grain mixture, from now onwards. Good feeding of the breeding stock will encourage early egg laying and will also aid in producing vigorous early-reared chickens. Full particulars regarding suitable mash and grain mixtures for breeding stock and also for young turkeys are given in Leaflet No. 37.

MANURIAL MIXTURES FOR FARM CROPS.

The advantages of purchasing supplies of artificial manures early in the season have been pointed out in the Farm Notes on page 534, and the prescriptions given below of suitable manurial mixtures for the different crops may be helpful to farmers in estimating the probable quantities of the various classes of artificial manures required:—

OATS.—For oats on lea ground in poor condition and on land under potatoes last year the following mixture of artificial manures per statute acre is recommended for application a few days before or at time of sowing the seed:—

1 cwt. sulphate of ammonia.
2 cwt. superphosphate.
1 cwt. 30 per cent. potash salts.

For oats on land following wild white clover lea and on other land in good condition, an application of 2 cwt. superphosphate and from ½ to 1 cwt. 30 per cent. potash salts per statute acre, increases the yield and assists in preventing lodging.

WHEAT.—An application of 1 cwt. of a nitrogenous manure, such as sulphate of ammonia, nitro-chalk or nitrate of soda, per statute acre should be applied during early April, and the braird harrowed lightly afterwards.

FLAX.—From 1 to 1½ cwt. muriate of potash per statute acre should be applied before sowing the seed. On land in poor condition the addition of ½ cwt. sulphate of ammonia per statute acre is beneficial.

POTATOES.—Where farmyard manure is available, a mixture of 1 cwt. sulphate of ammonia, 4 cwt. superphosphate, 1 cwt. muriate of potash, along with 15 tons farmyard manure per statute acre is recommended. The artificial manures can be mixed and stored for from two to three weeks before use without impairing the efficiency of the mixture.

If farmyard manure is not available, the mixture of artificials stated should be applied at the rate of 9 cwt. per statute acre.

TURNIPS.—A dressing of from 10 to 15 tons of farmyard manure, along with from 4 to 6 cwt. superphosphate, Semsol, high grade basic slag, or Gafsa rock phosphate per statute acre.

Where farmyard manure is not available, a dressing of a mixture composed of from 1 to 1½ cwt. sulphate of ammonia, 6 cwt. superphosphate or other phosphatic manure, and from 1 to 2 cwt. 30 per cent. potash salts per statute acre should be applied. If "finger and toe" disease is feared, basic slag should be used in preference to the other sources of phosphates.

MANGELS.—Liberal manuring of mangels is necessary to obtain best results. The following dressing per statute acre is recommended:—

20-25 tons farmyard manure.
2 cwt. sulphate of ammonia.
4 cwt. superphosphate.
4 cwt. kainit.

In addition, 1 cwt. nitrate of soda per acre, applied as a top dressing after thinning, benefits the crop.

CABBAGE AND KALE.—For these crops the following dressing per statute acre should be given:—

20-25 tons farmyard manure.
2 cwt. sulphate of ammonia.
4 cwt. superphosphate.
1 cwt. 30% potash salts.

HAY.—A suitable top dressing for application during March to land on which a crop of ordinary hay or hay for seed-saving purposes is to be grown is:—

1 cwt. sulphate of ammonia
2 cwt. superphosphate
1 cwt. 30 per cent. potash salts
} per statute acre.

PASTURES.—Where the slower acting phosphatic manures, such as high-grade basic slag or Gafsa rock phosphate, have not been applied during the winter months to grassland, Semsol or superphosphate can be applied at the rate of from 4 to 6 cwt. per statute acre during the spring months. On the lighter classes of soils the application of 1 cwt. 30 per cent. potash salts per acre, in addition to the phosphatic manure, is beneficial.

For the production of early grass, 1 cwt. sulphate of ammonia or nitro-chalk per acre should be applied during the first week of April.

WHEAT VARIETY TRIALS.

As in previous years, autumn wheat variety trials were carried out by the Agricultural Instructors during the past season. The six varieties which were tested in 1936 were again under trial at six centres. Owing to the very unfavourable weather conditions at sowing time, some of the varieties failed to grow, and accordingly, it is not possible to give the average results obtained from all six centres. Four varieties, namely, Squarehead's Master,

Little Tich, Queen Wilhelmina, and Yeoman II., were grown at all six centres, and the average yields obtained from these four varieties are given in the first line of the table below. At three centres all varieties succeeded and the average results obtained from these centres are given in the second line of the table. The average results obtained from the trials carried out in 1936 and in 1935, where similar varieties were grown, are also given in the table, along with the true average yields in respect of the three years' tests.

Year and No. of centres	Victor			Square-head's Master			Little Tich			Queen Wilhel-mina			Redman			Yeoman II		
	Grain		Straw	Grain		Straw	Grain		Straw	Grain		Straw	Grain		Straw	Grain		Straw
	c.	q.	cwt.	c.	q.	cwt.	c.	q.	cwt.	c.	q.	cwt.	c.	q.	cwt.	c.	q.	cwt.
1937 (6 centres)	—		—	17	3	30	16	0	21	23	1	31	—		—	18	0	28
1937 (3 centres)	21	3	42	16	2	36	15	0	24	23	3	38	13	1	34	17	2	30
1936 (6 centres)	16	3	30	16	2	29	13	3	28	19	2	32	16	0	30	17	2	28
1935 (8 centres)	24	0	32	23	0	34	—		—	25	3	34	22	3	31	21	3	31
True average yields 1935-37 (17 centres)	21	0	32	19	2	32	—		—	23	3	34	18	3	31	19	2	30

It will be seen that the variety Queen Wilhelmina has produced the highest average yield of grain throughout all these tests. This variety is one of the most prolific wheats in general cultivation. It produces a large, plump white grain, with long straw of moderate strength. For soils in good condition, Queen Wilhelmina can be relied on to produce heavy yields.

Victor has given the second highest average yield of grain, both in the 1937 trials and in the average of the three years' tests. The grain of this variety is white, and the straw is of medium length. It is fairly resistant to lodging, and is suitable for growing on strong, rich soils where there is a possibility of other varieties lodging.

Yeoman II., which is an improved type of the variety Yeoman, is a red wheat, and is also suitable for growing on soils where lodging is feared.

Squarehead's Master has given consistently good average yields in all the trials carried out. This well-known and popular variety can be depended on to produce satisfactory crops under a wide range of soil conditions.

The two varieties, Redman and Little Tich, have given lower average yields than those obtained from some of the other varieties. Redman has red plump grain with strong straw which resists lodging well. Little Tich was included in these trials for the first time in 1936. This variety has also red grain, but the straw is short and, consequently, is very resistant to lodging.

BARLEY VARIETY TESTS.

The value of barley meal for pig fattening purposes is now well recognised. In the production of bacon pigs of the quality specified by modern requirements, barley meal has probably no equal amongst the range of foods available and suitable for pig feeding.

The cultivation of barley has not, in the past, been practised extensively in Northern Ireland, except in a few districts where there was a demand for the grain for malting purposes. With the recent expansion in the pig industry, however, and the high cost of imported supplies of barley meal, the growing of barley on the farm has become of great economic importance. It is obvious that if satisfactory crops of barley could be grown generally in Northern Ireland and the produce fed to pigs, the cost of producing bacon pigs would be reduced, and at the same time the difficulties of obtaining carcases of the desired quality would be lessened.

With these considerations in mind, the Ministry is encouraging an extension in the area under barley, and, through the medium of the Agricultural Instructors employed by County Committees of Agriculture, experiments and demonstrations designed to obtain information regarding suitable varieties and other matters connected with barley growing, were carried out during the past three years. During 1937 three varieties, namely, Spratt Archer, Old Common (Chevallier) and Svalóf Victory, were tested at eight centres. The latter is a Swedish variety which was included in these trials for the first time in 1937. The average yields obtained per statute acre from these centres, along with the average yields obtained in respect of the two previous years' tests, are given in the following table: the true average yields per acre for the three years' trials are also given.

Year and number of centres	Spratt Archer		Old Common (Chevallier)		Svalóf Victory	
	Grain c. q.	Straw cwt.	Grain c. q.	Straw cwt.	Grain c. q.	Straw cwt.
1937 (8 centres) ..	16 1	34	15 1	32	14 0	30
1936 (8 centres) ..	17 3	32	19 0	32	—	—
1935 (8 centres) ..	24 1	34	22 1	30	—	—
1935-1937 (24 centres) ..	19 2	33	18 3	31	—	—

It will be noted that Spratt Archer has given the heaviest average yield in respect of the three years' trials. This variety has strong straw and resists lodging well. It is suitable for cultivation on the heavier types of soil in good condition. Old Common is an old established variety, and has given

good average yields in these trials. It has long, slender straw, and is best suited for growing on the lighter classes of soils, particularly in the later districts, since it ripens comparatively early in the season. The new variety Svalóf Victory, has given lower average yields than either Spratt Archer or Old Common. Victory is also a strong-strawed variety, and ripens earlier than even Old Common. Further tests with this variety will be necessary, however, before definite conclusions as to its suitability for Northern Ireland conditions can be drawn.

The results from these three years' trials show clearly that under average conditions good crops of barley can be grown in Northern Ireland. It must be emphasised, however, that barley will not be a success on heavy, clay soils, which are lacking in lime, or on cold, exposed fields in late districts. Farmers, particularly those engaged in pig-keeping, and having suitable land, are strongly advised to grow even a small area of this crop in the incoming season, and so reduce expenditure on purchased feeding stuffs. Moreover, since the Land Fertility Scheme came into operation, and supplies of lime can be obtained by farmers at half the usual cost, there is a further strong incentive to grow barley on the farm, since this crop gives best results when the soil is well supplied with lime. If possible, lime should be applied a year previous to the sowing of the barley crop, but where this has not been done, it can be applied on top of the ploughed land about a fortnight before the barley is sown. Full particulars regarding the liming of land are given in Leaflet No. 84.

Barley is best grown after potatoes or turnips, and on such land, manuring is not necessary. Where the land is being laid down to grass, the seeds mixture can be sown in the usual way, as barley forms a good "nurse" crop. Early sowing gives best results; the most satisfactory crops are those from sowings made not later than the first week of April. A seeding at the rate of from 14 to 16 stones per acre, where the seed is sown broadcast, is suitable.

There is now a good demand, and a satisfactory price, for samples of barley which are suitable for malting purposes, and this consideration should also be borne in mind when contemplating the sowing of this crop.

ANNOUNCEMENTS AND REMINDERS.

GENERAL.

Ox Warble Fly.—The Ox Warble Fly Order requires that cattle shall be dressed with a suitable derris wash between the 15th and 22nd March, and at intervals of 28 days afterwards, until no further warble swellings appear. Supplies of derris preparations for this purpose can be obtained from most agricultural merchants and chemists. Neglect to destroy the maggots at the proper times may lead to a prosecution.

Schools.—The next session at the Ulster Dairy School, Cookstown, and at the North-West School, Strabane, begins on the 5th April, 1938. Applications for the free scholarships to the North-West School should be made by intending pupils to the Secretary, or Agricultural Organiser, of the Committee of Agriculture for the County as soon as possible. Applications for admission to the Ulster Dairy School should be sent to the Ministry at once. Prospectuses, containing application forms, of both Schools, can be obtained free, on request from the Ministry. Further particulars of these Schools are given on page 547.

Annual Reports of County Agricultural Committees.—The annual Reports of the County Committees of Agriculture for the year 1937 will soon be available, and copies can be obtained free on request from the Secretary, or Agricultural Organiser, of the Committee of Agriculture for the County. These reports contain up-to-date information on agricultural, horticultural and poultry-keeping subjects, in addition to the detailed results of the experiments carried out by the various Instructors.

County Poultry Stations and Accredited Poultry Farms.—Hatching eggs from superior stock which have all passed the test for Bacillary White Diarrhoea disease can be obtained from County Poultry Stations and from owners of Accredited Poultry Farms. Lists, giving the names and addresses of hen, duck and goose stations, and also of turkey stations, can be obtained free on request from the Secretary, or Agricultural Organiser, of the County Committee of Agriculture. Lists of owners of Accredited Poultry Farms can be obtained free from the Ministry on request.

Supplies of Seed Oats.—Farmers desiring supplies of seed oats of the newer varieties and strains should communicate with the Agricultural Instructor for the district for advice as to where supplies may be obtained.

BARLEY.—Grow at least a small area of barley this year, and so save money on purchased feeding stuffs. Supplies of seed should be ordered as soon as possible.

SEED POTATOES.—To obtain heavy yields plant seed from healthy stocks of potatoes. Lists giving the names and addresses of growers of pure and healthy stocks can be obtained free from the Ministry, on request.

FEEDING OF POTATOES TO STOCK.—Feed potatoes to pigs, dairy cows and fattening cattle, and so reduce expenditure on purchased feeding stuffs. See Leaflet No. 35 for particulars regarding the feeding of boiled potatoes to pigs.

FORESTRY.

SCHEME FOR SUPPLYING YOUNG TREES AT REDUCED PRICES TO FARMERS.

The Ministry desires to direct the attention of farmers to the Scheme under which young forest trees are supplied from the Ministry's nurseries at the reduced price of 30/- per 1,000. There is still a number of such trees available, and those who wish to purchase 1,000 or more should communicate at once with the Secretary, Ministry of Agriculture, Stormont, Belfast, from whom copies of the Scheme and application forms can be obtained. Each lot of 1,000 trees would include not more than two species, except that a few White Spruce or Austrian Pine, of which there is only a limited quantity, and which are intended for shelter belts, could be included in a consignment if desired for planting in the outer rows of the belts composed of other species. A selection may be made from the following species: Sitka Spruce, Norway Spruce, Scots Pine, Douglas Fir, Mountain Pine, Austrian Pine, Pinus Murrayana, and White Spruce.

LECTURES.

The following lectures have been arranged by County Committees of Agriculture:—

County	Day & Date	Centre	Time	Subject
Armagh	Thurs., 17th Feb.	Clare R.P. Hall	8-0 p.m.	Lime and the Land
Down	Mon., 28th Feb.	Masonic Hall, Millisle	8-0 p.m.	Poultry-keeping
Londonderry	Fri., 18th Feb.	St. Columba's P.E. School, Ballerin, Garvagh	7-0 p.m.	The Land Fertility Scheme
	Mon., 21st Feb.	Terrydremond P.E. School, Limavady	7-0 p.m.	Cultivation of Vegetables
Tyrone	Thurs., 17th Feb.	Academy Boys' School, Strabane	7-30 p.m.	Fruit and Forest Trees
	Fri., 18th Feb.	Dunamore P.E. School, Cookstown	7-30 p.m.	Planting of Forest Trees and Shrubs
	Fri., 25th Feb.	Dooish P.E. School, Drumquin	8-0 p.m.	Growing of Fruit and Vegetables
	Mon., 28th Feb.	Glencull P.E. School	7-30 p.m.	Growing of Fruit and Vegetables
	Wed., 2nd March	Tirnaskea P.E. School, Ballygawley	7-30 p.m.	Vegetable Growing

Classes in Poultry Keeping.

County	Day and Date of Commencement of Class	Centre	Time at which Class is held
Armagh	Mon., 21st February	Kilmore, Armagh	7-0 p.m.
Down	Mon., 14th February	Mr. E. Kane's House, The Square, Comber	2-30 p.m.

The above Classes will be held for several days each week, and will be continued for a period of at least three weeks.

DEMONSTRATIONS.

A Demonstration in Apple Spraying has been arranged by Londonderry County Committee of Agriculture to take place at Orchardtown, Eglinton, on Thursday, 24th February, commencing at 2-30 p.m.

The following Demonstrations on the Cutting and Laying of Hedges have also been arranged by County Londonderry Committee of Agriculture:—

Day & Date	Place
Mon., 14th February	Mr. R. Robertson's land, Kilrea Road, Garvagh.
Tues., 15th February	Mr. J. C. Drennans' farm, Carse Hill, Limavady.
Wed., 16th February	do. do. do.
Fri., 18th February	Mr. W. J. Hanna's farm, Moneymore Road, Desertmartin.
Sat., 19th February	Mr. David Kennedy's farm, Drumlamph, Bellaghy.
Mon., 21st February	Mr. Hugh Hazlett's farm, Liffock, Castlerock.
Tues., 22nd February	Mr. D. Hall Christie's land, Spittal Hill, Coleraine.
Wed., 23rd February	Mrs. Hull's farm, Seagorry, Killykergan.
Thurs., 24th February	Mr. William Ritchie's farm, Ballymaclenahan, Claudy.
Sat., 26th February	Mr. Thomas Cameron's farm, Fernlester, Coleraine.

Each of the above demonstrations will be held between 11-0 a.m. and 4.0 p.m.

SCHOOLS NEWS.

TRAINING OF GIRLS IN AGRICULTURAL SUBJECTS.

The activities of women in farm life in Northern Ireland are an important factor in the prosperity of the agricultural industry generally. The poultry industry for example, has been built up mainly by the womenfolk on the farm, and its importance can be judged from the fact that it is estimated that the output of eggs and poultry is equal in value to the output of cattle.

In these days of keen competition, it is essential that farmers' daughters shall have a knowledge of modern methods in their particular sphere of the agricultural industry. The Ministry has, therefore, provided two Schools where instruction is given in such subjects as Poultry-keeping, Dairying and Rural Housewifery.

NORTH-WEST SCHOOL, STRABANE.

Admission to this School at the commencement of any of the four annual sessions of 11 weeks' duration, which begin in January, April, July and October of each year, is gained through the medium of Scholarships offered by each County Committee of Agriculture in Northern Ireland. These Scholarships are awarded to equally eligible applicants in the order in which their applications are received and cover the cost of tuition, board, and residence at the School. The instruction given at this School is adapted to meet the needs of girls who, having completed their primary school education, wish to obtain instruction of a specialised nature, and is such that on the completion

of a course of training they are better qualified when they return to their home farms to pursue with interest and added gain, the work pertaining to such a sphere of life. The minimum age for admission is 16 years, and those girls who wish to apply for one of the County Committee's Scholarships should obtain the free illustrated School Prospectus from either the Secretary, Ministry of Agriculture, Stormont, Belfast, or the Secretary (or Agricultural Organiser) of the County Committee of Agriculture for the County in which they reside. Applications should be submitted to the Secretary or Agricultural Organiser of the applicant's County Committee of Agriculture. It should be noted that girls who have satisfactorily completed a course at the North-West School, will receive preference when applying for admission to the Ulster Dairy School, Cookstown, for more advanced instruction.

The next session at the School will commence on the 5th of April, and early application is, therefore, essential.

The names of the students admitted to the North-West School for the session which commenced on the 4th of January, and which will terminate on the 24th of March, 1938, are as follows :—

County Antrim :
Miss M. E. Duncan, Drumnakeel, Ballycastle.
Miss E. McDowell, Hightown, Kilwaughter, Larne.
Miss M. McLister, East Torr, Ballyvoy.
Miss A. McMullan, The Grove, Carnlough.
Miss J. E. Wharry, Harphall, Carnlough.

County Armagh :
Miss E. Donaghy, Tullydonnell, Silverbridge, Newry.

County Down :
Miss A. E. Martin, Levallyreagh, Dromara.
Miss M. T. McEvoy, Ballydrummond, Leitrim P.O., Banbridge.

County Fermanagh :
Miss M. Maguire, Aughoo, Tullyrossmearn.
Miss M. McManus, Dernagore, Derrylin P.O.

County Londonderry :
Miss M. S. Acheson, Liswatty, Cloyfin, Coleraine.
Miss L. Blair, Gortnamoyagh, Garvagh.
Miss M. A. Bradley, Corrud, Maghera.
Miss S. J. McCloy, Tamnaymullan, Maghera.
Miss M. McKenna, Fallagloon, Maghera.
Miss M. McMillan, Liswatty, Cloyfin, Coleraine.
Miss B. McReynolds, Feeny.
Miss J. Murphy, Carnaban, Dungiven.

County Tyrone :
Miss A. Coyle, Drumgormal, Stewartstown.
Miss K. W. Curran, Dullaghan, Dromore.
Miss M. A. McNabb, Lisdoo, Dromore.
Miss J. F. Nugent, Gillygooley, Omagh.
Miss H. M. Warnock, Ballymenagh, Dungannon.

ULSTER DAIRY SCHOOL, COOKSTOWN.

Practical and theoretical instruction is provided in Dairying and Poultry-keeping in all their branches as well as in Rural Housewifery which includes cookery, laundry and sewing. The School is the most up-to-date of its kind in Northern Ireland and, besides training girls who will return to their own homes and put their knowledge into practice there, it also enables suitable pupils to qualify for free training as dairymaids. In addition girls trained at this School may, if they attain a sufficiently high standard at the term examinations, be recommended for more advanced training with a view to qualifying as Instructors in Poultry-keeping and Butter-making. Under the County Committees of Agriculture these officers command salaries ranging from £170 per annum to £300 per annum.

The ordinary School course lasts for three terms, and the School fees, by reason of the fact that entry is by partial Scholarship, are only three guineas per term of 11 weeks, inclusive of board and residence. The free illustrated Prospectus of the School may be obtained from the Secretary, Ministry of Agriculture, Stormont, Belfast, and from the Lady Superintendent, Ulster Dairy School, Cookstown. Girls who wish to undergo a course of training should submit their applications to the Secretary, Ministry of Agriculture, Stormont, Belfast.

The next session at this School will commence on the 5th of April and, therefore, early application is essential. The names of students who were admitted on the 4th January last, to fill the vacancies which arose as a result of girls leaving on the completion of their course, are given below:—

Miss M. E. Conn, The Grange, Castlerock, County Londonderry.
" B. Henry, Ballymacpeake, Portglenone, County Londonderry.
" A. McAlinney, Tullyvalley, Seskinore, Omagh, County Tyrone.
" A. McGlone, Main Street, Dromore, County Tyrone.
" M. Proctor, Ballytrone, Loughgall, County Armagh.
" A. Quinn, Broughderg, Omagh, County Tyrone.
" S. Rainey, 13 Galgorm Street, Ballymena, County Antrim.
" M. J. B. Richardson, Shanecracken, Markethill, County Armagh.
" J. Thompson, Ballee, Ballymena, County Antrim.

SIXTEENTH EGG LAYING TEST AT STORMONT.

The fourth period of four weeks ended on the 20th January, 1938. There was an increase in egg-production, and a further increase in the number of scoring eggs. The total number of eggs laid during the period was 9,601,

which gives an average of 13.5 eggs per bird. Of this number 8,407, or 87.5 per cent. were scoring eggs (super grade and first grade), whereas the percentage of scoring eggs in the previous period was 82.5 per cent.

The average egg-production for all birds originally penned for the 16 weeks the test has been in progress is 49.5 as compared with 55 for the first 16 weeks of the previous test.

The highest average egg-production for the fourth period is again to the credit of the birds in Section 6 (Club Entries), viz., 15.8 eggs per bird; the Station-holders' Rhode Island Reds in Section 5 (c) being next with an average of 15.6 eggs per bird.

Seven birds died during the period, bringing the total number of deaths to 27. This represents a mortality rate of 3.8 per cent., which compares with a rate of 1.97 per cent. in respect of the first four periods of the preceding test.

The following are particulars of the leading pens in each Section at the end of the fourth period:—

SECTION 1. WHITE WYANDOTTES (OPEN). 22 PENS.

Position.	No. of Pen.	Name and Address of Owner.	Number of eggs laid.				Test Score
			Super Grade	1st Grade	2nd Grade	Below 2nd Grade	
1	7	Lt.-Col. J. P. Galbraith, Clanabogan, Omagh, Co. Tyrone.	143	221	35	1	364
2	10	Mrs. J. R. Jackson, Fortview, Coleraine, Co. Londonderry.	74	276	98	4	352
3	16	Mr. T. J. McMillan, Crossgar, Co. Down.	180	141	9	—	321
4	19	Mr. J. C. Stewart, Balloo, Killinchy, Co. Down.	125	191	66	1	316

SECTION 2. WHITE LEGHORNS (OPEN). 9 PENS.

1	31	Mr. J. O. Turkington, Derryinver, Lurgan, Co. Armagh.	182	92	12	1	274
2	29	Mr. J. Stevenson, Maze View, Corcreevy, Hillsborough, Co. Down.	55	216	75	9	271
3	26	Mr. T. J. McMillan, Crossgar, Co. Down.	128	121	26	—	249

SECTION 3. RHODE ISLAND REDS (OPEN). 26 PENS.

Position.	No. of Pen.	Name and Address of Owner.	Number of eggs laid.				Test Score
			Super Grade	1st Grade	2nd Grade	Below 2nd Grade	
1	39	Mrs. H. Farr, Elsneuk, Dundrum Road, Newcastle, Co. Down.	297	94	7	1	391
2	49	Mrs. J. McNeill, Drain's Bay, Larne, Co. Antrim.	187	142	8	—	329
3	55	Mr. W. Patton, The Hill, Loughries, Newtownards, Co. Down.	143	173	111	10	316
4	44	Miss E. E. Kennedy, Tullyreagh, Glarryford, Co. Antrim.	60	222	233	17	282

SECTION 4. ANY OTHER PURE BREED (OPEN). 15 PENS.

1	67	Mr. R. Holmes, Moneycarrie, Killykergan, Coleraine, Co. Londonderry. (Buff Rocks)	288	95	6	1	383
2	68	Mr. R. Holmes, Moneycarrie, Killykergan, Coleraine, Co. Londonderry. (Buff Rocks)	180	178	31	3	358
3	62	Mrs. M. Benson, Killymoon, Cookstown, Co. Tyrone. (Light Sussex)	76	148	26	3	224

SECTION 5(*a*). WHITE WYANDOTTES (STATIONHOLDERS). 9 PENS.

1	82	Mrs. M. Rodgers, Ballyginney, Dundrum, Co. Down.	177	177	35	—	354
2	76	Miss A. Brown, Ballyhill, Crumlin, Co. Antrim.	97	228	115	1	325
3	81	Miss A. Peel, Aghadalgon, Roses Lane Ends, Belfast.	124	137	62	2	261

SECTION 5(*b*). WHITE LEGHORNS (STATIONHOLDERS). 7 PENS.

1	91	Miss I. J. Magill, Mulloughdrin, Dromara, Co. Down.	262	110	62	—	372
2	89	Miss I. Gilmer, Rashee, Ballyclare, Co. Antrim.	117	149	19	—	266
3	90	Mrs. J. Knox, Shanmullagh, Ederney, County Fermanagh.	103	135	21	—	238

SECTION 5(*c*). RHODE ISLAND REDS (STATIONHOLDERS). 18 PENS

Position.	No. of Pen.	Name and Address of Owner.	Number of eggs laid.				Test Score.
			Super Grade	1st Grade	2nd Grade	Below 2nd Grade	
1	104	Miss S. McKee, Ardmillen House, Killinchy, Co. Down.	82	325	75	2	407
2	102	Mrs. R. McGiffert, Rathcunningham, Toye, Belfast.	168	227	23	—	395
3	110	Mrs. J. W. Stewart, Boghill, Coleraine, Co. Londonderry.	175	139	27	—	314

SECTION 6. POULTRY CLUBS AND YOUNG FARMERS' CLUBS. 12 PENS

1	116	Banbridge and District Poultry Club, Co. Down. (Rhode Island Red).	96	193	70	[illegible]	[illegible]
2	114	Ballywalter Young Farmers' Club, Co. Down. (Rhode Island Red.)	133	147	11	—	280
3	117	Crossgar Poultry Club, Co. Down. (Rhode Island Red.)	127	152	19	—	279

"Test Score" means the total of the super-grade and first-grade eggs. Miss S. McKee's pen, No. 104, of Rhode Island Reds in the Station-holders' Section for that breed, now occupies 1st place in the entire test, while Mrs. R. McGiffert's pen No. 102, of the same breed, and in the same Section, is second. Pen No. 30 of Rhode Island Reds in Section 3, entered by Mrs. Farr, now holds third place.

PRICES OF FEEDING STUFFS AT SPECIFIED CENTRES.

The following table shows the retail cash prices per cwt. of Feeding Stuffs at 1st February, 1938, at ten representative centres in Northern Ireland.

	Antrim	Armagh	Ballymena	Belfast	Castlewellan	Coleraine	Dungannon	Enniskillen	Omagh	Strabane
	s. d.	s. d.	s. d.	s. d.	s. d	s. d.	s. d.	s. d.	s. d.	s. d.
PROTEIN FOODS :										
Linseed (whole)	12 6	16 0	16 0	16 0	20 0	12 6	17 0	16 6	20 0	16 0
Linseed Cake, home-made	11 10½	13 0	12 6	12 0	11 3	—	13 6	11 6	12 6	—
Linseed Cake, foreign	11 10½	12 0	11 6	11 0	—	—	11 6	10 0	11 6	11 6
Linseed Cake Meal	11 10½	12 6	11 6	11 0	11 3	12 0	13 6	12 0	11 6	11 6
Cotton Cake, decorticated	10 0	—	9 9	10 6	10 6	9 9	10 6	10 6	10 6	10 3
Earthnut Cake, decorticated	10 0	—	9 6	9 0	—	9 6	10 6	10 3	10 3	—
Soya Bean Meal (extracted)	11 3	11 0	11 0	11 6	—	11 6	11 0	12 0	11 0	11 6
Fish Meal (60% protein)	17 6	—	16 0	16 6	—	—	16 6	15 6	17 6	17 6
Meat Meal (60% protein)	16 6	15 6	14 10½	—	15 6	—	15 9	—	15 9	—
Meat and Bone Meal (40% protein)	—	11 0	—	10 0	—	12 0	12 0	—	—	12 0
MEDIUM PROTEIN FOODS :										
Brewers Grains (dried)	—	—	7 6	—	—	—	—	—	—	—
Palm Kernel Cake	9 6	—	9 6	8 6	—	9 4½	—	—	9 6	—
Palm Kernel Meal	9 6	9 6	9 6	8 6	—	9 4½	—	—	—	—
STARCHY FOODS :										
Maize (whole)	8 0	8 6	8 6	8 0	9 0	8 9	8 6	8 9	—	—
Maize Meal	8 9	8 9	8 6	8 9	9 3	8 9	8 6	9 0	8 10½	8 9
Maize Flaked	9 0	9 6	9 0	9 3	9 6	9 6	9 6	9 9	9 6	9 3
Wheat (whole)	11 0	10 6	11 0	10 0	11 0	12 0	11 0	10 0	—	9 3
Bran, Red	9 0	9 0	8 3	9 0	—	8 9	9 0	9 3	9 3	9 6
Bran, White	10 0	10 3	9 10½	10 0	10 0	10 6	10 0	10 6	10 3	11 0
Pollard, Brown	9 0	9 0	8 6	9 0	—	9 3	9 0	9 6	9 3	9 6
Pollard, White	—	10 0	9 6	10 0	10 0	9 9	10 0	10 6	10 3	11 3
Barley Meal	10 3	10 6	9 6	10 0	10 0	10 6	9 9	10 6	10 6	11 0
Tapioca Root Flour	8 0	8 0	8 0	8 6	—	8 3	8 3	—	—	8 6
Oats (whole)	9 6	[illegible]	8 0	9 0	[illegible] 3	8 6	8 6	8 8	7 0	8 8
Crushed Oats	10 0	9 6	8 6	9 6	7 9	9 0	9 0	9 6	8 0	9 8

NON-CONCENTRATES :—The average prices at representative markets at the beginning of February, were as follows :— Potatoes (Main Crop), 2/4d. per cwt. ; Upland Hay, 89/7d. per ton ; Meadow Hay, 47/4d. per ton ; Oat Straw, 43/2d. per ton.

AVERAGE PRICES OF FEEDING STUFFS.

The following table shows the average retail cash prices per cwt. of feeding stuffs at 1st February, 1938, with comparative prices as at the first of the previous month; the costs per unit of protein equivalent and of starch equivalent are also given in respect of each month.

	Protein Equivalent	Starch Equivalent	Average price per cwt. at 1st Feb. 1938	Average price per cwt. at 1st Jan. 1938	Cost per unit of protein equivalent Feb.	Cost per unit of protein equivalent Jan.	Cost per unit of starch equivalent Feb.	Cost per unit of starch equivalent Jan.
Protein Foods			s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Linseed	19.0	119.0	16 3	16 10	17 1	17 9	2 9	2 10
Crushed linseed	19.0	119.0	18 1	18 0	19 0	19 0	3 0	3 0
Linseed cake (home-made)	25.0	72.0	12 3	12 4	9 10	9 11	3 5	3 5
Linseed cake	25.0	72.0	11 4	11 2	9 1	8 11	3 2	3 1
Linseed cake meal	25.0	72.0	11 10	11 5	9 6	9 2	3 3	3 2
Decorticated Cotton cake	35.0	71.0	10 3	10 3	5 10	5 10	2 11	2 11
Decorticated Earthnut cake	41.0	73.0	9 10	9 11	4 10	4 10	2 8	2 9
Extracted Soya bean meal	38.0	64.0	11 4	11 4	6 0	6 0	3 7	3 7
Fish meal (60% protein)	53.0	59.0	16 10	16 9	6 4	6 4	5 8	5 8
Meat meal (60% protein)	55.0	61.0	15 8	15 11	5 8	5 10	5 2	5 3
Meat & Bone Meal (40% protein)	36.0	44.0	11 5	11 8	6 4	6 6	5 2	5 4
Medium Protein Foods								
Palm Kernel cake	17.0	75.0	9 3	9 1½	10 11	10 9	2 6	2 5
Palm kernel meal	17.0	75.0	9 3	9 0	10 11	10 7	2 6	2 5
Starchy Foods								
Maize	6.8	81.0	8 6	8 2	25 0	24 0	2 1	2 0
[illegible]	6.8	81.0	8 9	8 5	25 9	24 9	2 2	2 1
[illegible]	8.6	83.0	9 5	9 1	21 11	21 2	2 3	2 2
[illegible]	9.6	72.0	10 8	10 10	22 3	22 7	3 0	3 0
[illegible]	10.0	43.0	9 0	8 11	18 0	17 10	4 2	4 1
[illegible]	10.0	43.0	10 3	10 2	20 6	20 4	4 9	4 9
[illegible]	11.0	60.0	9 1	9 1½	16 6	16 7	3 0	3 1
[illegible]	11.0	60.0	10 2	10 2	18 6	18 6	3 5	3 5
[illegible]	7.0	70.0	10	10 3	29 3	29 1	2 11	2 11
[illegible]	7.6	69.0	8 4	8 1	21 11	21 3	2 9	2 9
Crushed oats	7.6	60.0	9 1	8 9	23 11	23 3	3 0	3 0
Tapioca root flour	1.0	83.5	8 3	8 3	165 0	165 0	2 0	2 0
Non-concentrates								
Potatoes	0.6	18.0	2 4	2 4¼	77 9	78 6	2 7	2 7
Upland hay	4.9	24.0	3 0	3 0	12 3	12 3	2 6	2 6
Meadow hay	4.6	31.0	2 4½	2 5	10 4	10 6	1 6	1 7
Oat straw	0.9	20.0	2 2	2 2½	48 2	49 1	2 2	2 2½

The object of the foregoing tables, besides providing information regarding the prices of feeding stuffs and the trend of prices, is to give purchasers a

guide as to the economic purchase of supplies. It should be understood that the price per ton is not a sound basis on which to judge whether or not a particular food or grade of a particular food is good value for money. The composition of the foods is the only basis on which different grades can be compared. The value of foods of different kinds, but of the same nature in reference to market prices, can also be compared on this basis.

In the case of an artificial manure which supplies only one fertilising ingredient as, for example, sulphate of ammonia, which supplies nitrogen, the cost of the unit of nitrogen at the price charged can be determined quite readily by dividing the price per ton by the percentage of nitrogen in the sample, and the figure thus obtained is the cost of a unit of nitrogen. By this method the most economical source of nitrogen can be ascertained. Similarly, in the cases of phosphatic and potassic manures.

With feeding stuffs, however, the same method cannot be applied to determine comparative values. This is because every feeding stuff contains three important food constituents in varying proportions. These are (1) carbohydrates, (2) oils or fats, and (3) proteins or albuminoids. The carbohydrates comprise a group of substances such as starch, sugar and cellulose. These substances supply heat or energy to the animal, and the surplus goes to form fat. They are the fuel which the animal requires to keep the body "fires" burning. The oils of a feeding stuff are also heat and energy suppliers, and the surplus is stored as fat. The oils are approximately 2½ times more valuable than the carbohydrates as heat and energy producers, but excess in a ration may lower its digestibility and cause digestive troubles. The proteins are the most valuable and most expensive food constituent. They contain nitrogen and are the part of the food from which products which contain protein are chiefly made. Thus the protein products, such as lean meat, milk and eggs, are formed principally from protein, and young, growing animals, dairy cows and laying hens must have an adequate quantity of protein for full growth, development and production.

While all animals require a certain amount of carbohydrates, oils and proteins, the relative amounts depend on the class of stock. For example, a two-year-old fattening bullock requires much less protein than a dairy cow in milk, and a fattening chicken less than a laying pullet.

There are wide differences in the composition of the different kinds of feeding stuffs. Some are rich in carbohydrates and, therefore, particularly valuable for fattening purposes. These include oats, maize, barley and wheat, and their products. Others are rich in protein and are valuable for producing flesh, milk and eggs. These include decorticated cotton cake, decorticated earthnut cake, meat meal and soya bean meal.

In the following table the composition of some of the commonly used feeding stuffs is shown—

	Water.	Protein.	Oil.	Carbohydrates.
Non concentrates				
Swede turnips ..	88	1	0.2	9
Potatoes ..	75	2	0.1	21
Cabbage ..	89	1.5	0.5	8
Oat Straw ..	14	4	2	37
Meadow hay ..	10	10	3	45
Pasture grass ..	80	3.5	0.8	10
Fattening Foods				
Crushed oats ..	13	9	6	60
Maize meal ..	12	10	4	70
Barley meal ..	13	12	2	66
Pollard ..	13	15	5	57
Flesh forming foods				
Decorticated Cotton cake ..	9	40	9	26
Decorticated Earthnut cake ..	10	46	7	23
Meat meal ..	11	60	6	—
Soya bean meal ..	11	44	1.5	32

The problem confronting the purchaser of feeding stuffs, who is concerned with the business of getting best value for money, is one which is much more difficult to solve than is the case with artificial fertilisers. There are at least four aspects of the problem to be considered:

(1) The quality of the different foods offered for sale. This can be determined by reference to the particulars of composition which a seller must give a purchaser in accordance with the Fertilisers and Feeding Stuffs Act.

(2) The physical condition of the foods, and if fresh or stale.

(3) The suitability of the foods for the purpose in view.

(4) The comparative values of the foods at the prices quoted.

The chief concern of this section of the Report is comparative values and, therefore, that aspect of the problem will be considered specifically.

The proteins play a part in the nutrition of the animal which cannot be taken by either carbohydrates or oils. In addition to this, the proteins, carbohydrates and oils have very different values for the production of energy or fat. It therefore follows that the simple procedure of totalling the percentages of these three ingredients and dividing this total into the price per ton in order to obtain a value for a unit of the food-stuff is quite unsound. Various methods have been used to compare the values of different feeding stuffs, but none is completely satisfactory. For practical purposes the least cumbersome is the

method whereby the food-stuffs are placed in groups of similar composition, and the values of the members of each group are then compared by consideration of (a) their protein equivalents, and (b) their starch equivalents. The starch equivalent is the number of pounds of starch which would be required to produce the same amount of "fat" in an animal as 100 pounds of the food-stuff in question. It is essentially a measure of the fat-producing value of the food-stuff. The protein equivalent is the number of pounds of digestible true protein, plus half the number of pounds of non-protein nitrogenous substances such as amides, present in 100 pounds of the foodstuff. This is a measure of the value of the food-stuff to the animal as a source of protein.

By this method all foods can be reduced to comparable standards based on (1) the protein equivalent, and (2) the starch equivalent.

The next stage in comparing values is to determine the cost of a unit of protein equivalent and of starch equivalent in the different foods which are being compared, and to enable the reader to do this the protein and starch equivalent figures for the different foods are given on the table on page 554, and also the cost per unit of protein equivalent and of starch equivalent in each case. These costs have been determined by dividing the protein equivalent figure and the starch equivalent figure, respectively, into the current price per ton, and the lower the quotient figures thus obtained the cheaper is the particular food as a source of protein or of starch equivalent as the case may be.

However, it would be quite misleading to compare the cost of a unit of protein equivalent in a protein food (which is purchased principally for its protein) with the cost of a similar unit in a starchy food. In other words, foods such as maize meal and pollard cannot be compared on the basis of cost of protein equivalent with foods such as decorticated cotton cake and meat meal.

The best course to adopt is to consider for what purpose the particular food is required, decide what foods are suitable for that purpose, examine the samples of these different foods which are offered and, if all appear to be satisfactory, apply the unit value system of determining which one provides protein equivalent or starch equivalent at the cheapest rate. A few examples may be helpful in explaining the procedure.

(1) Suppose it is intended to purchase a protein food for the purpose of balancing a ration for dairy cows. The protein foods suitable for dairy cows are decorticated cotton cake, decorticated earthnut cake and soya bean meal. From the table on page 554 it is seen that at the current average prices of these foods the cost of the unit of protein equivalent in each is as follows:—

Decorticated cotton cake	...	...	5/10d.
Decorticated earthnut cake	...	...	4/10d.
Soya bean meal	...	...	6/0d.

Accordingly decorticated earthnut cake is the cheapest source of protein.

(2) A protein food is required as a milk substitute to balance the ration for fattening pigs. The foods suitable for this purpose are soya bean meal, meat meal and meat and bone meal. Referring again to the table, it is seen that at the current average prices of these foods the cost of the unit of protein equivalent in each is as follows:—

Soya bean meal	...	...	6/0d.
Meat meal (60% protein)	...	...	5/8d.
Meat and bone meal (40% protein)		...	6/4d.

Therefore meat meal (60% protein) is the cheapest source of protein amongst the purchased foods suitable for pigs. This example shows also how the price per ton may mislead a purchaser into thinking he is being economical when he buys at the cheapest price. The 60% meat meal costs 4/3d. per cwt. more than the 40% meat and bone meal, and yet it is a cheaper source of protein than the latter. Besides, a lesser proportion in the meal mixture will suffice, and having usually a lower content of oil than the 40% grade, it is likely to prove more satisfactory than that grade, both from the thriving point of view and its effect on the quality of the bacon.

(3) Whether is it more economical to feed white pollard than brown pollard or white bran than red bran, even though the prices per ton of the white grades are higher than those of the brown or red grades? The figures in the table show that the cost of both the unit of protein equivalent and of starch equivalent is less for the brown pollard than the white, and less for the red than the white bran. It follows, therefore, that at current prices the coloured grades of pollard and bran are cheaper than the white grades. It should be remembered in this connection, however, that the comparison of costs in these cases has been made on the assumption that the composition of the coloured grades is the same as that of the white grades. A pollard containing say, 8 per cent. fibre, even if of a white colour, would have a far lower feeding value than one containing only 4 per cent. of fibre. Colour is not a guide as to the feeding value of pollard or bran.

PRICES OF FERTILISERS AT SPECIFIED CENTRES.

The following table shows the retail cash prices per ton of fertilisers at 1st February, 1938, at representative centres in Northern Ireland.

	Antrim	Armagh	Ballymena	Belfast	Castlewellan	Coleraine	Dungannon	Enniskillen	Omagh	Strabane
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Nitrogenous Manures :										
Nitrate of Soda (15.5% N.) ..	-	—	—	8 0 0	—	—	—	9 0 0	—	8 5 0
Sulphate of Ammonia (20.6% N.)	9 0 0	—	7 12 6	7 11 0	7 17 6	—	8 0 0	7 15 0	8 0 0	8 0 0
Nitro Chalk (15.5% N.) ..	9 0 0	—	—	7 10 6	7 18 6	—	—	—	8 10 0	8 5 0
Phosphatic Manures :										
Superphosphate (16% S.P.A.) ..	4 10 0	3 17 6	—	3 16 3	—	3 15 0	3 17 6	4 0 0	4 2 6	4 5 0
Semsol (5% S.P.A., 15½% P.A.) ..	3 15 0	3 12 6	3 10 0	3 5 0	3 10 0	3 5 0	3 12 6	3 12 6	3 13 9	3 10 0
*Basic Slag (18% P.A.) ..	3 17 6	4 0 0	4 0 0	3 9 0	- -	4 0 0	—	4 0 0	- -	3 17 6
Gafsa Rock Phosphate (26% P.A.)	3 7 6	3 5 0	3 5 0	2 15 0	3 5 0	2 17 6	3 5 0	3 7 6	3 6 3	3 5 0
Potash Manures :										
Kainit (14% P.)	3 10 0	—	—	3 0 0	—	—	3 12 6	3 10 0	3 15 0	3 15 0
Potash Salts (20% P.) ..	4 7 0	4 10 0	—	4 0 0	—	- -	4 7 6	4 7 6	—	4 5 0
Potash Salts (30% P.) ..	5 15 0	—	—	5 5 0	5 12 6	—	5 12 6	5 10 0	5 17 6	5 10 0
Muriate of Potash (50% P.) ..	8 17 6	—	—	8 10 0	8 15 0	9 10 0	9 0 0	9 10 0	9 0 0	9 0 0
Agricultural Salt	1 5 0	2 0 0	—	3 10 0	—	—	1 15 0	2 0 0	—	2 17 6

Abbreviations : N—Nitrogen. S.P.A.—Soluble Phosphoric Acid. P.A.—Phosphoric Acid. P—Potash.

* If obtained under the Land Fertility Scheme, the price of British made basic slag will be 25 per cent. less than the figures quoted, since a subsidy equivalent to one-quarter is payable.

The cost of the unit of fertilising ingredient is determined by dividing the price per ton by the percenatge of the ingredient contained in the manure, and this method of determining values is the only sound basis on which two different manures or two grades of the same manure, supplying the same fertilising ingredient, can be compared. The price per ton is not a reliable guide as to which is the better value for money. For example, at the prices ruling at Belfast for the various manures, as shown on the table on page 559, the costs of the units of the fertilising ingredients are as follow:—

Nitrate of Soda (15.5% N.)	10/3¾	(Nitrogen)
Sulphate of Ammonia (20.6% N.)	7/4	,,
Nitro Chalk (15.5% N.)	9/8½	,,
Superphosphate (16% S.P.A.)	4/9¼	(Phosphoric Acid
Semsol (5% S.P.A., 15½% P.A.)	3/2	,,
Basic Slag (18% P.A.)	3/10	,,
Gafsa Rock Phosphate (26% P.A.)	2/1½	,,
Kainit (15% P.)	4/3½	(Potash)
Potash Salts (20% P.)	4/–	,,
Potash Salts (30% P.)	3/6	,,
Muriate of Potash (50% P.)	3/4¾	,,

It is seen that the price of 14% Kainit is £3 0s. 0d. per ton, and of 30% Potash Salts is £5 5s. 0d. per ton, and it might be concluded that the Kainit was the better value for money. This is not so. The 30% Potash Salts contains more than twice as much Potash as the Kainit, and is, therefore, a cheaper source of potash when the price is even double that at which Kainit is offered. The cost of a unit of potash in the 30% Potash Salts is seen to be only 3/6d., whereas the cost of a unit of potash in Kainit is 4/3½d. At the prices ruling for these manures, 30% Potash Salts is, therefore, better value for money than Kainit. Similarly, it is seen that at the prices prevailing at Belfast Gafsa Rock Phosphate is the cheapest source of phosphoric acid and Sulphate of Ammonia is the cheapest source of Nitrogen.

In connection with the costs of the units of phosphoric acid, as shown in the table on the previous page, it should be noted that in the case of Superphosphate, the cost is that of a unit of soluble phosphoric acid: whereas in the cases of Basic Slag, Semsol, and Gafsa Rock Phosphate, the figures represent the cost of a unit of insoluble phosphoric acid. It would not, therefore, be correct to compare the unit price of the phosphoric acid in Superphosphate with those of the phosphoric acid in the other three.

TRADE AND PRICES OF LIVE STOCK AT BELFAST AUCTION MARTS.

At the Belfast Auction Marts last month larger supplies of fat cattle marked the opening sales held on Tuesday, 4th January. Trade was easier, but a large volume of business was transacted, mainly for export requirements, at around previous quotations. In the following week supplies were smaller, and although trade generally was good prices fluctuated and the average quotation fell by 1/- per live cwt. Supplies showed a further decline in the third week, and with buyers more active, quick clearances were made at firm prices.

Increased supplies at the sales held on 25th, however, met a slower trade, and prices generally eased by 1/- to 1/6d. per live cwt., but at the subsequent sales, held on 1st February, they again tended upward. As the above average quotations show, prices for fat cattle were more or less steady at the Belfast marts, although the demand fluctuated somewhat throughout the month.

The trade for store cattle at the marts remained fairly brisk up till the close of the month, when the demand slackened. Prices, however, were maintained at firm levels throughout.

Dairy cattle continued to meet a keen demand at high prices until the third week when prices reflected the duller state of the market. Later, however, trade and prices showed some recovery, but quotations remained below the best.

At the auctions for fat sheep and lambs business generally eased during the month, but for good quality supplies prices were firm at the close.

PRICES OF FAT STOCK.

The following table shows the average prices per live cwt. of fat cattle in the Belfast Cattle Marts during each week in January, 1938, compared with those ruling in the corresponding weeks in 1937.

Week ended	s.	d.	*Week ended*	s.	d.
8th January, 1938 ..	41	9	9th January, 1937 ..	33	9
15th ,, ..	40	9	16th ,, ..	33	9
22nd ,, ..	41	3	23rd ,, ..	33	3
29th ,, ..	40	0	30th ,, ..	33	6
Average for month ..	40	0	Average for month ..	33	6
5th February, 1938	40	3	6th February, 1937	33	3

PRICES OF OTHER STOCK AT THE BELFAST AUCTION MARTS.

Description.		Week ended 8-1-38	Week ended 15-1-38	Week ended 22-1-38	Week ended 29-1-38	Week ended 5-2-38
Fat Cows	Range of 1st quality	£14 to £20	£15 to £21-5	£15 to £22	£15 to £19-15	£14 to £21
	,, 2nd ,,	£8 to £15	£12 to £17	£10 to £16-10	£11-10 to £16-10	£10-10 to £17-10
Store Cattle : Forward Stores	Range of 1st quality	£12-15 to £18	£12-10 to £17-10	£13 to £16-7-6	£14-10 to £16-2-6	£13 to £17-7-6
	,, 2nd ,,	£10 to £14-5	£12 to £17	£12 to £14-5	£8-15 to £14	£11 to £15
Calves (under 12 months)	,, 1st ,,	£8-5 to £12	£8-10 to £12	£4-7-6 to £11-2-6	£8 to £10-10	£8-10 to £11
	,, 2nd ,,		£4-15 to £8	£4-12-6 to £7	£3-2-6 to £7-10	£7-5 to £8-10
Dairy Cattle : Milch Cows	Range of 1st quality	£24 to £29	£24 to £31-10	£20 to £31	£22-10 to £29	£22 to £28
	,, 2nd ,,	£17 to £23	£18 to £23	£18 to £23	£18 to £22	£18 to £21
Springers	,, 1st ,,	£22 to £27-10	£22 to £26-15	£21 to £24	£21 to £26	£20 to £23
	,, 2nd ,,	£18 to £21	£18 to £21-10	£17 to £20	£17 to £20	£17 to £19
Sheep and Lambs : Crossbred and White Ewes	Range of 1st quality	39/- to 52/-	38/- to 65/-	40/- to 50/-	32/- to 54/-	35/- to 55/-
	,, 2nd ,,	30/- to 40/-	30/- to 44/-	30/- to 44/-	28/- to 39/-	
Blackface Ewes	,, 1st ,,	30/- to 38/6	30/- to 43/-	30/- to 41/6	30/- to 45/-	30/- to 50/-
	,, 2nd ,,	19/- to 31/-	24/- to 34/-	20/- to 31/6	20/- to 34/-	22/6 to 32/-
Crossbred and White Lambs	,, 1st ,,	40/- to 58/-	37/- to 54/-	40/- to 58/-	40/- to 58/-	40/- to 61/-
	,, 2nd ,,	29/- to 44/-	24/- to 39/-	30/- to 42/-	33/- to 44/-	30/- to 44/-
Blackface Lambs	,, 1st ,,	18/- to 28/-	14/- to 30/-	15/- to 24/6	18/- to 25/-	23/- to 28/-
	,, 2nd ,,	14/- to 26/6	14/- to 24/-		14/- to 24/-	18/- to 24/-
Rams	,, 1st ,,	46/- to 63/-	45/- to 67/-	48/- to 60/-	45/- to 57/6	45/- to 87/-
	,, 2nd ,,	35/- to 45/-	35/- to 50/-	35/- to 49/-	35/- to 47/-	40/- to 59/-

PRICES OF LIVE STOCK.

Average prices of Live Stock at Fairs during the month of January, 1938.

Date	Fair	Calves (under 9 months)	Store Cattle	Fat Cattle (18 months and over)	Springers		Milch Cows	Fat Lambs (under 12 months old)	Young Pigs
					Cows	Heifers			
		Per head	Per cwt.	Per cwt.	Per head	Per head	Per head	Per head	Per head
		£ s.	Live weight.	Live wgt.	£ s.	£ s.	£ s.	£ s.	£ s.
4	Omagh	7 5	40/- to 42/-	40/-	17 15	17 0	16 0	—	—
5	Londonderry	—	34/- to 41/-	39/6	19 10	—	—	—	1 6/6
5	Rathfriland	6 17/6	35/- to 40/-	41/-	19 10	16 10	19 0	‡0 18/6	1 9/3
6	Ballymoney	7 11/3	35/- to 42/6	—	20 0	18 10	17 15	—	1 13
6	Strabane	—	40/- to 42/-	40/6	15 0	—	—	—	—
7	Moy	—	37/6 to 42/-	40/-	16 15	15 0	16 15	—	—
8	Irvinestown	7 5	40/- to 41/6	37/6	17 0	15 10	—	*1 7/6	1 10
10	Enniskillen	6 7/3	38/- to 44/-	42/-	17 0	16 10	15 10	—	1 15
12	Crossgar	—	39/- to 41/-	—	18 10	—	17 0	—	1 17/6
12	Kilrea	—	32/- to 42/-	41/-	22 0	20 0	—	—	1 8
14	Ballygawley	—	32/- to 44/-	38/6	19 10	—	18 10	—	1 17/6
15	Portadown	5 13/3	33/- to 37/6	39/-	19 0	17 0	20 0	—	1 12/6
17	Camlough	5 10	33/- to 41/-	39/6	19 0	18 0	17 0	†1 10 ‡0 18/6	—
18	Claudy	—	34/6 to 41/-	40/-	16 0	12 10	—	—	1 7
19	Lisnaskea	5 7/9	32/- to 41/-	41/6	18 0	17 0	16 10	—	1 10
20	Ballynahinch	—	39/- to 42/-	—	19 0	17 0	17 15	—	1 17
21	Moneymore	5 1	38/- to 41/6	40/-	21 10	—	19 0	—	1 10
22	Fintona	7 8/3	40/- to 43/-	40/-	17 15	17 0	16 5	†2 0	1 10
27	Antrim	—	39/- to 44/-	40/-	21 10	—	—	—	1 13
28	Castlederg	5 12/9	37/- to 42/-	39/6	15 10	—	—	†1 10	1 12/6
28	Killylea	—	30/- to 44/6	38/6	16 10	—	16 10	—	—
29	Ballymena	7 1/6	30/- to 44/-	—	24 10	23 0	22 0	—	1 13

* Long Wools. † Downs and Cross. ‡ Mountain.

SHIPMENTS OF LIVE STOCK.

Statement showing the Shipments of Live Stock from Northern Ireland Ports during the Months of January, 1938; December, 1937, and January, 1937.

PORTS OF :—	CATTLE.						SHEEP.				PIGS.			
	Fat	Stores	Milch Cows	Springers.	Calves	Total	Fat	Stores	Lambs	Total	Fat	Stores	Total	Horses
Belfast ..	4,930	5,050	1,047	47	—	11,074	5,592	—	—	5,592	8,499	—	8,499	144
Larne	4	1,852	—	—	—	1,856	—	—	—	—	3,539	278	3,817	16
Londonderry	192	5,348	22	28	236	5,826	1,464	—	—	1,464	690	—	690	11
Newry	8	103	—	—	—	111	60	—	—	60	100	—	100	—
Total, January, 1938 ..	5,134	12,353	1,069	75	236	18,867	7,116	—	—	7,116	12,828	278	13,106	171
Total, December, 1937 ..	4,478	5,631	823	34	—	10,966	6,710	—	—	6,710	14,962	176	15,138	86
Total, January, 1937 ..	7,463	9,972	1,005	73	124	18,637	6,552	—	—	6,552	10,562	168	10,730	168

IMPORTS AND EXPORTS.

Table showing the Imports and Exports through Northern Ireland ports of certain Agricultural Products during the month ended 31st December, 1937, and the twelve months ended 31st December, 1937, with comparative figures for the corresponding periods in 1936. This information also includes trade with Eire across the land boundary.

(These figures are supplied through the courtesy of the Ministry of Commerce and are subject to revision).

Commodity.	IMPORTS.				EXPORTS.			
	Month ended 31st December		12 months ended 31st December		Month ended 31st December		12 months ended 31st December	
	1937	1936	1937	1936	1937	1936	1937	1936
Bacon .. .. cwt.	3,491	3,582	41,349	36,073	40,807	34,864	397,250	404,316
Hams .. .. cwt.	1,449	1,860	18,189	23,547	13,237	15,506	125,783	149,287
Pork .. .. cwt.	424	1,236	5,102	12,147	2,832	4,944	34,613	41,831
Butter .. .. cwt.	12,275	6,389	200,772	193,311	233	147	4,348	6,601
Eggs .. .. Gt. hds.	16,796	14,181	829,629	1,081,731	127,062	136,154	3,405,050	3,497,175
Oat Products (inc. Oatmeal)cwt.	2,581	1,729	25,380	27,925	9,344	9,996	85,427	79,903
Potatoes .. .. tons	213	1,013	6,730	12,089	*19,546	*21,887	*184,050	*230,608
Poultry .. .. cwt.	1,950	1,035	4,794	5,286	22,425	22,918	196,721	177,713
Grass Seeds .. cwt.	3,745	2,635	12,764	15,621	41,200	20,795	315,470	340,733

*These figures represent the quantities of potatoes inspected for shipment by the Ministry of Agriculture.

There were no imports of oats direct from abroad during the month of December, 1937, or in the corresponding month of last year.

Table showing the numbers of Live Stock (1) exposed for sale, and (2) sold at 20 fairs in Northern Ireland, during the months of January and December, 1937, and January, 1938:—

Description of Live Stock.	January, 1937		December, 1937		January, 1938	
	Number exposed for sale.	Number sold.	Number exposed for sale.	Number sold.	Number exposed for sale.	Number sold.
Store Cattle ..	4,932	3,525	4,782	3,798	6,543	4,789
Fat Cattle ..	2,099	1,876	1,147	1,032	1,560	1,367
Dairy Cattle ..	920	736	763	680	1,003	853
Sheep ..	241	209	109	89	187	137
Lambs ..	213	147	480	358	198	114
Young Pigs ..	3,440	2,350	2,317	1,793	3,253	2,493

With one notable exception, the supply of store cattle at fairs last month was small for the time of year, and rough weather conditions for a period were responsible to some extent for the smaller numbers. The usual number of shippers and dealers attended most fairs and maintained a good demand for forward stock. The condition and quality of the beasts was of a high standard, and good clearances were effected in all districts. Recent high prices were maintained, and in many centres values tended to harden towards the close of the month. Good strong bullocks were freely purchased with a view to fattening for the subsidy, and heifers suitable for breeding were again in demand. Small cattle showing quality and condition were also sought after for grazing. Fat cattle supplies improved, but remained rather below normal for the time of year. A larger proportion of the animals were certified for the subsidy. Trade for beef animals was fairly steady all month, and good clearances were effected. Prices were firm to harder until the close of the month when values became less settled. Best sellers were medium weight bullocks of quality and finish. Dairy cattle were exposed for sale in larger numbers. The offerings were mostly of fairly good quality. Best types of springers and young cows met a firm enquiry, and made recent high prices, but aged cows and those with defective udders were neglected. Small supplies of sheep and lambs were offered at the fairs, and the quality of the offerings was generally inferior. Trade on the whole was slow, but some fat animals were in fair request for local requirements at around previous price levels. Supplies of young pigs last month increased to about normal dimensions. A good volume of trade was transacted at fairs, and the previous month's prices were usually repeated if not exceeded. Store pigs, where offered, were a good trade at steady rates. Small to medium numbers of sows were offered at a few centres. York and York crosses were in demand, and prices varied considerably with the quality, and ranged from £6 to £12.

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15th February, 1938.

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List of Leaflets and other Publications.

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„ 2. Improvement of Farm Poultry.
„ 3. Feeding for Egg Production.
„ 4. Marketing of Eggs.
„ 5. The Dishorning of Calves.
„ 6. The Packing of Apples in Standard Boxes
„ 7. Potato Trials.
„ 8. Seed Testing for Farmers.
„ 9. The Renovation of Orchards.
„ 10. Fruit Tree Pests—Capsid Bugs.
„ 11. Fruit Tree Pests—Aphides and Apple Sucker.
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„ 28. The Construction of a Laying House for Poultry.
„ 29. The Selection and Breeding of Laying Hens.
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„ 32. Roup of Poultry (Fowl Pox).
„ 33. Spraying Calendar for Apple Orchards.
„ 34. The Pruning of Apple Trees.
„ 35. The Fattening of Pigs.
„ 36. Advantages of Milk Recording.
„ 37. The Raising and Fattening of Turkeys.
„ 38. The Destruction of Charlock.
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No. 44. Results of Crop Experiments.
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„ 55. Destruction of Ragwort or Bendweed.
„ 56. Identification of Egg Supplies.
„ 57. How to have Eggs of First Quality.
„ 58. How the Fertilisers and Feeding Stuffs Act benefits the Farmer.
„ 59. Bacillary White Diarrhoea (Pullorum Disease).
„ 60. Advantages of Winter Agricultural Classes.
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„ 62. The Production of Timber on the Farm.
„ 63. Sheep—Castration, Docking, Foot-Rot and Care of Feet.
„ 64. The Destruction of Warble Fly Maggots in Cattle.
„ 65. The Packing of Apples in Barrels.
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„ 81. The Construction of Cow Houses.
„ 82. White Scour in Calves.
„ 83. The Care, Management and Feeding of the Poultry Breeding Stock.
„ 84. Lime and Liming.

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CIRCULARS.

No. 1. Phosphatic Fertilisers.
„ 5. Why Pay a Tax on the Horns of Cattle ?
„ 8. Basic Slag.
„ 9. Smut in Oats.
„ 10. Purchase of Fertilisers and Feeding Stuffs.
„ 11. Fertilisers and Feeding Stuffs Act—General Summary.
„ 12. The Treatment of Liver Fluke.
„ 13. The ox-Warble Fly.
„ 306. Fertilisers and Feeding Stuffs Act, 1926—Revision of Regulations.

MISCELLANEOUS PUBLICATIONS.

Store Cattle.
Reports on Egg-Laying Tests.
Crop Insurance.
List of Growers of Certified Crops of Immune Varieties of Potatoes.
List of Growers of Certified Crops of Non-Immune Varieties of Potatoes.
The Ministry's Monthly Report.
Register of Premium Stallions.
Guide to the Live Stock Breeding Act (Northern Ireland), 1922.
Guide to the Marketing of Fruit Act (Northern Ireland), 1932.

Any of the above publications may be obtained free of charge and post free on application to the Secretary, Ministry of Agriculture, Stormont, Belfast.

The following publications can be obtained from His Majesty's Stationery Office, 80 Chichester Street, Belfast, at the prices stated :—

(1) The Annual Report of the Ministry of Agriculture for Northern Ireland. Price 2/6 net.
(2) Annual Report upon the Agricultural Statistics of Northern Ireland. Price 2/- net.
(3) The Journal of the Ministry of Agriculture for Northern Ireland. Price 2/6 net.
(4) The Agricultural Output of Northern Ireland, 1925. Price 2/6 net.

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